

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

Assignment ID: PATI136935

|                                    |                         |
|------------------------------------|-------------------------|
| <b>SUBMISSION TYPE:</b>            | NEW ASSIGNMENT          |
| <b>NATURE OF CONVEYANCE:</b>       | ASSIGNMENT              |
| <b>CONVEYING PARTY DATA</b>        |                         |
| <b>Name</b>                        | <b>Execution Date</b>   |
| UATC, LLC                          | 03/21/2024              |
| <b>RECEIVING PARTY DATA</b>        |                         |
| <b>Company Name:</b>               | Aurora Operations, Inc. |
| <b>Street Address:</b>             | 1654 Smallman Street    |
| <b>City:</b>                       | Pittsburgh              |
| <b>State/Country:</b>              | PENNSYLVANIA            |
| <b>Postal Code:</b>                | 15222                   |
| <b>PROPERTY NUMBERS Total: 118</b> |                         |
| <b>Property Type</b>               | <b>Number</b>           |
| Application Number:                | 10581333                |
| Application Number:                | 16752199                |
| Application Number:                | 62796873                |
| Application Number:                | 15853448                |
| Application Number:                | 62567439                |
| Application Number:                | 62617006                |
| Application Number:                | 15987517                |
| Application Number:                | 62646604                |
| Application Number:                | 16114985                |
| Application Number:                | 62597805                |
| Application Number:                | 15928739                |
| Application Number:                | 62617012                |
| Application Number:                | 15987534                |
| Application Number:                | 17305375                |
| Application Number:                | 18309256                |
| Application Number:                | 62625868                |
| Application Number:                | 15919917                |
| Application Number:                | 15919926                |
| Application Number:                | 62644946                |
| Application Number:                | 16153298                |

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| Property Type       | Number   |
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| Application Number: | 17446683 |
| Application Number: | 62644952 |
| Application Number: | 16012226 |
| Application Number: | 62644956 |
| Application Number: | 16153312 |
| Application Number: | 62672335 |
| Application Number: | 62697701 |
| Application Number: | 16173654 |
| Application Number: | 17810752 |
| Application Number: | 62712479 |
| Application Number: | 16166950 |
| Application Number: | 62719982 |
| Application Number: | 16173633 |
| Application Number: | 62685875 |
| Application Number: | 16437827 |
| Application Number: | 62736767 |
| Application Number: | 16210967 |
| Application Number: | 17653101 |
| Application Number: | 18364274 |
| Application Number: | 62795728 |
| Application Number: | 16536925 |
| Application Number: | 62797638 |
| Application Number: | 16366561 |
| Application Number: | 62835207 |
| Application Number: | 16536895 |
| Application Number: | 18046789 |
| Application Number: | 18520416 |
| Application Number: | 62796840 |
| Application Number: | 16752242 |
| Application Number: | 17929610 |
| Application Number: | 62795734 |
| Application Number: | 16538275 |
| Application Number: | 17652818 |
| Application Number: | 62829583 |
| Application Number: | 16839208 |
| Application Number: | 62824973 |
| Application Number: | 16460421 |
| Application Number: | 17648176 |

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 62797693 |
| Application Number: | 16774566 |
| Application Number: | 62648541 |
| Application Number: | 16366543 |
| Application Number: | 62834337 |
| Application Number: | 16849586 |
| Application Number: | 62947253 |
| Application Number: | 63018447 |
| Application Number: | 17247497 |
| Application Number: | 63018087 |
| Application Number: | 17302377 |
| Application Number: | 62982693 |
| Application Number: | 63083632 |
| Application Number: | 62562866 |
| Application Number: | 15789425 |
| Application Number: | 62613273 |
| Application Number: | 62613248 |
| Application Number: | 15914740 |
| Application Number: | 15914713 |
| Application Number: | 16867794 |
| Application Number: | 62582731 |
| Application Number: | 15903399 |
| Application Number: | 17305275 |
| Application Number: | 62590074 |
| Application Number: | 15903435 |
| Application Number: | 62582764 |
| Application Number: | 16183012 |
| Application Number: | 62616114 |
| Application Number: | 15913372 |
| Application Number: | 16948271 |
| Application Number: | 62611315 |
| Application Number: | 15891017 |
| Application Number: | 16946971 |
| Application Number: | 17660543 |
| Application Number: | 62586818 |
| Application Number: | 16191735 |
| Application Number: | 62660014 |
| Application Number: | 16125205 |

| Property Type       | Number   |
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| Application Number: | 16125000 |
| Application Number: | 62642835 |
| Application Number: | 16353871 |
| Application Number: | 17444506 |
| Application Number: | 62570262 |
| Application Number: | 15793700 |
| Application Number: | 16866701 |
| Application Number: | 62562879 |
| Application Number: | 15789334 |
| Application Number: | 16947565 |
| Application Number: | 16731816 |
| Application Number: | 17652384 |
| Application Number: | 16727680 |
| Application Number: | 17647815 |
| Application Number: | 16727654 |
| Application Number: | 16727637 |
| Application Number: | 16727695 |
| Application Number: | 17805362 |
| Application Number: | 63198799 |
| Application Number: | 09205895 |
| Application Number: | 10104823 |
| Application Number: | 09003389 |

#### CORRESPONDENCE DATA

**Fax Number:**

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Phone:** 6123499595

**Email:** request@slwip.com

**Correspondent Name:** Kasie Grover

**Address Line 1:** PO BOX 2938

**Address Line 4:** Minneapolis, MINNESOTA 55402

|                                |              |
|--------------------------------|--------------|
| <b>ATTORNEY DOCKET NUMBER:</b> | 5772.000001  |
| <b>NAME OF SUBMITTER:</b>      | Kasie Grover |
| <b>SIGNATURE:</b>              | Kasie Grover |
| <b>DATE SIGNED:</b>            | 04/02/2024   |

**Total Attachments: 123**

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## **PATENT ASSIGNMENT AGREEMENT**

THIS PATENT ASSIGNMENT AGREEMENT ("Agreement") is made and entered into as of March 21, 2024 (the "Effective Date"), by and between UATC, LLC, a Delaware limited liability company having a place of business at 1654 Smallman Street, Pittsburgh, PA 15222 ("Assignor") and Aurora Operations, Inc., a Delaware corporation having a place of business at 1654 Smallman Street, Pittsburgh, PA 15222 ("Assignee").

**WHEREAS**, Assignor agrees to transfer the Assigned Patents (defined below) to Assignee; and

**NOW, THEREFORE**, in consideration of the premises and the mutual representations, warranties, covenants and agreements set forth in this Agreement and other good and valuable consideration, the receipt of which is acknowledged by the parties, the parties agree as follows:

- (1) Definitions. As used in this Agreement, the following terms have the respective meanings set forth below.
  - (a) "Effective Date" has the meaning set forth in the preamble to this Agreement.
  - (b) "Patents" means (i) any and all patents, patent applications, and invention disclosures; (ii) all inventions and improvements described and claimed therein; (iii) all reissues, divisions, continuations, renewals, extensions, and continuations-in-part thereof; (iv) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages and payments for past and future infringements thereof; (v) all rights to sue for past, present, and future infringements thereof; and (vi) all rights corresponding to any of the foregoing throughout the world, including the right to claim priority to (i) and (iii).
- (2) Assignment. Assignor does hereby irrevocably and unconditionally assign, transfer, convey and deliver to the Assignee all of Assignor's right, title and interest in, to and under its Patents, including those set forth in Exhibit A attached hereto ("Assigned Patents"), together with the goodwill associated therewith.
- (3) Assumption. Assignee hereby accepts the assignment, transfer, conveyance and delivery of the right, title and interest in, to and under the Assigned Patents, sold, transferred, assigned, conveyed and delivered by Assignor pursuant to Section 2.
- (4) Further Assurances. Assignor agrees to execute and deliver, at the request of Assignee, all papers, instruments and agreements, and to perform any other reasonable acts Assignee may require, in order to vest all of Assignor's right, title and interest in and to the Assigned Patents in Assignee, including, without limitation, all documents necessary to record in the name of Assignee the assignment of the Assigned Patents with the United States Patent and Trademark Office and, with respect to any foreign rights included in the Assigned Patents, with any other applicable foreign or international office or registrar.



- (5) Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings, both written and oral, between the parties with respect to the subject matter hereof and thereof.
- (6) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns.
- (7) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of law thereof (or of any other jurisdiction).
- (8) Counterparts. This Agreement may be executed in two or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts (any one of which may be by any digital imaging device (e.g., .pdf format)) have been signed by each of the parties and delivered to the other party, it being understood that all parties need not sign the same counterpart.
- (9) Severability. If any term, provision, covenant, or restriction of this Agreement is held by a court of competent jurisdiction or other governmental body to be invalid, void, or unenforceable, the remainder of the terms, provisions, covenants, and restrictions of this Agreement will remain in full force and effect and will in no way be affected, impaired, or invalidated so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such a determination, the parties will negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the fullest extent possible.
- (10) Amendment, Waiver, and Termination. This Agreement cannot be amended, waived, or terminated except by a writing signed by the parties hereto and that identifies itself as an amendment to this Agreement.
- (11) Headings; Effectiveness. The section headings and captions contained herein are for convenience of reference only and will not control or affect the meaning or construction of any provision hereof. A signed copy of this Agreement delivered by e-mail, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

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IN WITNESS WHEREOF, Assignor and Assignee have caused this Agreement to be signed and executed by the undersigned officers before a Notary Public on this 21st day of March, 2024:

**ASSIGNOR**

UATC, LLC, a Delaware limited liability company

By: \_\_\_\_\_

Name: Catherine Tornabene

Title: Deputy General Counsel, Intellectual Property

**ASSIGNEE**

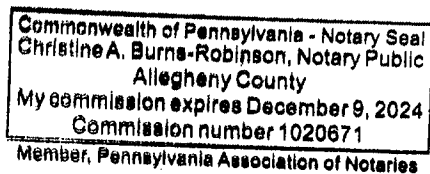
Aurora Operations, Inc., a Delaware corporation

By: \_\_\_\_\_

Name: Nolan Shenai

Title: Vice President & General Counsel

Subscribed and sworn before me this 21st day of March, 2024.



By: \_\_\_\_\_

Name: \_\_\_\_\_

Notary Public

**EXHIBIT A**

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| AU      | 2014352833         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | 2014352833    | UATC, LLC              |
| AU      | 2019268121         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | 2019268121    | UATC, LLC              |
| AU      | 2014239979         | 3/14/2014   | METHODS, SYSTEMS AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS | 2014239979    | UATC, LLC              |
| AU      | AU 2017290902      | 7/1/2017    | AUTONOMOUS VEHICLE CONTROL USING SUBMAPS                                    | 2017290902    | UATC, LLC              |
| AU      | 2016368552         | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES                             | 2016368552    | UATC, LLC              |
| AU      | 2017225790         | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM                             | 2017225790    | UATC, LLC              |
| AU      | 2016393890         | 12/23/2016  | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE                               | 2016393890    | UATC, LLC              |
| AU      | 2018295099         | 6/22/2018   | AUTONOMOUS VEHICLE COLLISION MITIGATION SYSTEMS AND METHODS                 | 2018295099    | UATC, LLC              |
| AU      | 2018211324         | 8/3/2018    | Multi-Modal Switching on a Collision Mitigation System                      | 2018211324    | UATC, LLC              |
| AU      | 2019210587         | 7/31/2019   | OBJECT DETECTION BASED ON LIDAR INTENSITY                                   | 2019210587    | UATC, LLC              |
| CA      | 2,931,055          | 11/21/2014  | LIDAR SCANNER CALIBRATION   | 2,931,055     | UATC, LLC              |
| CA      | 2,902,430          | 3/14/2014   | METHODS, SYSTEMS AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS | 2,902,430     | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| CA      | 3,029,742          | 7/1/2017    | AUTONOMOUS VEHICLE CONTROL USING SUBMAPS                    | 3,029,742     | UATC, LLC              |
| CA      | 3,187,447          | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES             | 3,187,447     | UATC, LLC              |
| CA      | 3,206,651          | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES             | 3,206,651     | UATC, LLC              |
| CA      | 3,005,673          | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES             | 3,005,673     | UATC, LLC              |
| CA      | 3,006,661          | 12/12/2016  | VEHICLE TRACTION MAP FOR AUTONOMOUS VEHICLES                |               | UATC, LLC              |
| CA      | 3,015,894          | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM             | 3,015,894     | UATC, LLC              |
| CA      | 3,015,338          | 12/23/2016  | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE               | 3,015,338     | UATC, LLC              |
| CA      | 3,038,542          | 10/12/2017  | NEURAL NETWORK SYSTEM FOR AUTONOMOUS VEHICLE CONTROL        | 3,038,542     | UATC, LLC              |
| CA      | 3,047,086          | 12/12/2017  | Vehicle Servicing System                                    | 3,047,086     | UATC, LLC              |
| CA      | 3,047,095          | 6/13/2019   | Vehicle Management System                                   |               | UATC, LLC              |
| CA      | 3,054,555          | 2/19/2018   | Vehicle Control System                                      |               | UATC, LLC              |
| CA      | 3,008,091          | 6/13/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLE   | 3,008,091     | UATC, LLC              |
| CA      | 3,068,317          | 12/20/2019  | AUTONOMOUS VEHICLE COLLISION MITIGATION SYSTEMS AND METHODS |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| CA      | 3,013,157          | 8/1/2018    | Multi-Modal Switching on a Collision Mitigation System   | 3,013,157     | UATC, LLC              |
| CA      | 3,074,464          | 3/2/2020    | SYSTEMS AND METHODS FOR CHANGING A DESTINATION OF AN AUTONOMOUS VEHICLE IN REAL-TIME             |               | UATC, LLC              |
| CA      | 3,110,727          | 7/25/2019   | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSSTALK  |               | UATC, LLC              |
| CA      | 3,127,823          | 1/24/2020   | VEHICLE ROUTING WITH LOCAL AND GENERAL ROUTES  |               | UATC, LLC              |
| CA      | 3,134,772          | 3/23/2020   | Perception and Motion Prediction for Autonomous Devices  |               | UATC, LLC              |
| CA      | 3,134,773          | 3/23/2020   | COMPRESSION OF IMAGES HAVING OVERLAPPING FIELDS OF VIEW USING MACHINE-LEARNED MODELS             | 3,134,773     | UATC, LLC              |
| CA      | 3,134,819          | 3/23/2020   | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC SENSOR DATA VIA MACHINE LEARNING                    |               | UATC, LLC              |
| CA      | 3,134,771          | 3/23/2020   | DEPTH ESTIMATION FOR AUTONOMOUS DEVICES  |               | UATC, LLC              |
| CA      | 3,173,446          | 2/16/2021   | COMPUTER SYSTEM FOR UTILIZING ULTRASONIC SIGNALS TO IMPLEMENT OPERATIONS FOR AUTONOMOUS VEHICLES |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| CA      | 3,174,273          | 2/26/2021   | AUTONOMOUS VEHICLE COMPUTING SYSTEM WITH PROCESSING ASSURANCE  | 3,174,273     | UATC, LLC              |
| CA      | 3,207,406          | 2/26/2021   | AUTONOMOUS VEHICLE COMPUTING SYSTEM WITH PROCESSING ASSURANCE  |               | UATC, LLC              |
| CA      | 3,207,403          | 2/26/2021   | AUTONOMOUS VEHICLE COMPUTING SYSTEM WITH PROCESSING ASSURANCE  |               | UATC, LLC              |
| CA      | 3,158,601          | 11/16/2020  | Systems and Methods for Vehicle-to-Vehicle Communications for Improved Autonomous Vehicle Operations |               | UATC, LLC              |
| CA      | 3,158,597          | 11/16/2020  | Conditional Entropy Coding for Efficient Video Compression   | 3,158,597     | UATC, LLC              |
| CA      | 3,176,996          | 4/26/2021   | Light Detection and Ranging (Lidar) System   |               | UATC, LLC              |
| CA      | 3,170,637          | 2/26/2021   | SYSTEM AND METHOD FOR AUTONOMOUS VEHICLE SYSTEMS SIMULATION  |               | UATC, LLC              |
| CA      | 3,174,307          | 3/30/2021   | System and Methods for Controlling State Transitions Using a Vehicle Controller                      |               | UATC, LLC              |
| CA      | 3,192,462          | 9/10/2021   | Systems and Methods for Generating Basis Paths for Autonomous Vehicle Motion Control                 | 3,192,462     | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| CA      | 3,188,460          | 8/6/2021    | LIGHT DETECTION AND RANGING (LIDAR) SYSTEM HAVING TRANSMIT OPTICS FOR PRE-COLLIMATION STEERING          |               | UATC, LLC              |
| CA      | 3,126,250          | 7/28/2021   | RECOVERING AND SIMULATING PEDESTRIANS IN THE WILD   |               | UATC, LLC              |
| CA      | 3,126,245          | 7/28/2021   | COMPRESSION OF MACHINE-LEARNED MODELS BY VECTOR QUANTIZATION  |               | UATC, LLC              |
| CA      | 3,126,236          | 7/28/2021   | SYSTEMS AND METHODS FOR SENSOR DATA PACKET PROCESSING AND SPATIAL MEMORY UPDATING FOR ROBOTIC PLATFORMS |               | UATC, LLC              |
| CA      | 3,136,909          | 10/29/2021  | SYSTEMS AND METHODS FOR SIMULTANEOUS LOCALIZATION AND MAPPING USING ASYNCHRONOUS MULTI-VIEW CAMERAS     |               | UATC, LLC              |
| CA      | 3,139,449          | 11/17/2021  | GENERATING MOTION SCENARIOS FOR SELF-DRIVING VEHICLES   |               | UATC, LLC              |
| CA      | 3,139,480          | 11/17/2021  | SYSTEMS AND METHODS FOR<br><br>GENERATING SYNTHETIC MOTION PREDICTIONS                                  |               | UATC, LLC              |
| CA      | 3,139,421          | 11/17/2021  | AUTOMATIC ANNOTATION OF OBJECT TRAJECTORIES IN MULTIPLE DIMENSIONS                                      |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number                | Current owner/assignor |
|---------|--------------------|-------------|--|------------------------------|------------------------|
| CA      | 3,139,477          | 11/17/2021  | SYSTEMS AND METHODS FOR SIMULATING TRAFFIC SCENES  |                              | UATC, LLC              |
| CA      | 3,199,370          | 11/17/2021  | SYSTEMS AND METHODS FOR VIDEO OBJECT SEGMENTATION  |                              | UATC, LLC              |
| CA      | 3,139,481          | 11/17/2021  | SYSTEMS AND METHODS FOR ACTOR MOTION FORECASTING WITHIN A SURROUNDING ENVIRONMENT OF AN AUTONOMOUS VEHICLE |                              | UATC, LLC              |
| CA      | 3,139,575          | 11/17/2021  | SYSTEMS AND METHODS FOR MOTION FORECASTING AND PLANNING FOR AUTONOMOUS VEHICLES                            |                              | UATC, LLC              |
| CN      | 201480022190.5     | 3/14/2014   | Methods, systems, and apparatus for multi-sensory stereo vision for robots                                 | ZL201480022190.5 / 105164549 | UATC, LLC              |
| CN      | 201780064218.5     | 10/12/2017  | NEURAL NETWORK SYSTEM FOR AUTONOMOUS VEHICLE CONTROL   | ZL201780064218.5 / 109863513 | UATC, LLC              |
| CN      | 201780083981.2     | 12/12/2017  | Vehicle Servicing System   | ZL201780083981.2 / 110235152 | UATC, LLC              |
| CN      | 201780084481.0     | 12/12/2017  | Vehicle Management System  | ZL201780084481.0 / 110214344 | UATC, LLC              |
| CN      | 201880049195.5     | 6/22/2018   | Autonomous vehicle collision mitigation system and method  | ZL201880049195.5 / 111052022 | UATC, LLC              |
| CN      | 201980017075.1     | 1/30/2019   | Sensor assembly for vehicle  | ZL201980017075.1 / 111819360 | UATC, LLC              |
| CN      | 201880061470.5     | 8/20/2018   | System and method for prioritizing objects of prediction vehicles  | ZL201880061470.5 / 111133485 | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number                | Current owner/assignor |
|---------|--------------------|-------------|--|------------------------------|------------------------|
| CN      | 201880082744.9     | 11/16/2018  | Rotary data coupler, method of using the same, and LIDAR system                      | ZL201880082744.9 / 111512561 | UATC, LLC              |
| CN      | 201880086021.6     | 11/21/2018  | Object interactive prediction system and method for autonomous delivery vehicle      | ZL201880086021.6 / 111656295 | UATC, LLC              |
| CN      | 201980060015.8     | 7/31/2019   | Tray system for freight transport  |                              | UATC, LLC              |
| CN      | 201980060835.7     | 7/25/2019   | Laser radar system design for mitigating laser radar crosstalk                       |                              | UATC, LLC              |
| CN      | 201480072487.2     | 11/21/2014  | LIDAR SCANNER CALIBRATION  | ZL201480072487.2 / 106463565 | UATC, LLC              |
| CN      | 201680049672.9     | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                       | ZL201680049672.9 / 107924191 | UATC, LLC              |
| CN      | 201680082277.0     | 12/20/2016  | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE                                   | ZL201680082277.0 / 109196966 | UATC, LLC              |
| CN      | 201780022918.8     | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM                                      | ZL201780022918.8 / 109074073 | UATC, LLC              |
| CN      | 201680084495.8     | 12/23/2016  | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE  | ZL201680084495.8 / 109070891 | UATC, LLC              |
| CN      | 201780051990.3     | 7/13/2017   | Sensor cleaning device and sensor cleaning system                                    | ZL201780051990.3 / 109641572 | UATC, LLC              |
| CN      | 201880067240.X     | 8/27/2018   | System and method for changing the destination of an autonomous vehicle in real time | ZL201880067240.X / 111226253 | UATC, LLC              |
| CN      | 202180026776.9     | 3/30/2021   | System and method for controlling state transition using vehicle controller          |                              | UATC, LLC              |
| CN      | 202180031639.4     | 4/26/2021   | Optical detection and ranging (LIDAR) system   |                              | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number                | Current owner/assignor |
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| CN      | 202180057045.0     | 8/6/2021    | Optical detection and ranging (LIDAR) system with transmission optics for pre-alignment steering              |                              | UATC, LLC              |
| CN      | 202180069516.X     | 9/10/2021   | System and method for generating a base path for autonomous vehicle movement control                          |                              | UATC, LLC              |
| CN      | 202110788887.5     | 2/19/2018   | Vehicle Control System  |                              | UATC, LLC              |
| CN      | 201810878940.9     | 8/3/2018    | Multi-modal switching on collision mitigation systems   | ZL201810878940.9 / 109389867 | UATC, LLC              |
| CN      | 201210245890.3     | 7/16/2012   | Lighting up system and lighting up method   | ZL201210245890.3 / 103547050 | UATC, LLC              |
| CN      | 202010557990.4     | 7/13/2017   | Sensor cleaning device and sensor cleaning system   | ZL202010557990.4 / 111572499 | UATC, LLC              |
| CN      | 201810653532.3     | 6/22/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES  | ZL201810653532.3 / 109117709 | UATC, LLC              |
| CN      | 202111423961.X     | 11/21/2018  | OBJECT INTERACTION PREDICTION SYSTEMS AND METHODS FOR AUTONOMOUS VEHICLES                                     | ZL202111423961.X / 114326705 | UATC, LLC              |
| CN      | 201910701809.X     | 7/31/2019   | Autonomous traffic tool computing system, optical detection and ranging calibration system and method thereof | ZL201910701809.X / 110888146 | UATC, LLC              |
| CN      | 202210036681.1     | 1/30/2019   | SENSOR ASSEMBLY FOR VEHICLES  |                              | UATC, LLC              |
| DE      | 14714039.6         | 3/6/2014    | LIDAR SCANNER   | EP2972471 / 602014052919.4   | UATC, LLC              |
| FR      | 14714039.6         | 3/6/2014    | LIDAR SCANNER   | EP2972471                    | UATC, LLC              |
| GB      | 14714039.6         | 3/6/2014    | LIDAR SCANNER   | EP2972471                    | UATC, LLC              |
| DE      | 14864968.4         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | EP3072162 / 602014070860.9   | UATC, LLC              |
| FR      | 14864968.4         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | EP3072162                    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number              | Current owner/assignor |
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| GB      | 14864968.4         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | EP3072162                  | UATC, LLC              |
| EP      | 01788407.0         | 12/14/2017  | VEHICLE CONTROLS BASED ON THE MEASURED WEIGHT OF FREIGHT                            |                            | UATC, LLC              |
| DE      | 14770009.0         | 3/14/2014   | METHODS, SYSTEMS, AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS        | EP2972478 / 602014073400.6 | UATC, LLC              |
| DE      | 16842925.6         | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                      | EP3344507 / 602016056223.5 | UATC, LLC              |
| DE      | 21167711.7         | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                      | EP3865964 / 602016084346.3 | UATC, LLC              |
| EP      | 21167711.7         | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                      | 3865964 / 602016084346.3   | UATC, LLC              |
| FR      | 16842925.6         | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                      | EP3344507                  | UATC, LLC              |
| GB      | 16842925.6         | 8/31/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                                      | EP3344507                  | UATC, LLC              |
| DE      | 16852522.8         | 9/28/2016   | METHOD OF OPERATING AN AUTONOMOUS VEHICLE HAVING INDEPENDENT AUXILIARY CONTROL UNIT | EP3356899 / 602016067929.9 | UATC, LLC              |
| EP      | 21210874.0         | 9/28/2016   | METHOD OF OPERATING AN AUTONOMOUS VEHICLE HAVING INDEPENDENT AUXILIARY CONTROL UNIT |                            | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number              | Current owner/assignor |
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| DE      | 16879958.3         | 12/20/2016  | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE        | EP3395132 / 602016057590.6 | UATC, LLC              |
| DE      | 21168193.7         | 12/20/2016  | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE        | EP3869930 / 602016082074.9 | UATC, LLC              |
| GB      | 16879958.3         | 12/20/2016  | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE        | EP3395132                  | UATC, LLC              |
| DE      | 16879976.5         | 12/20/2016  | INTEGRATED CLUTCH STEERING SYSTEM                         | EP3393887 /602016056278.2  | UATC, LLC              |
| EP      | 21167695.2         | 12/20/2016  | INTEGRATED CLUTCH STEERING SYSTEM                         |                            | UATC, LLC              |
| GB      | 16879976.5         | 12/20/2016  | INTEGRATED CLUTCH STEERING SYSTEM                         | EP3393887                  | UATC, LLC              |
| DE      | 202016008771.2     | 12/20/2016  | INTELLIGENT LENS MASKING SYSTEM FOR AN AUTONOMOUS VEHICLE | DE202016008771 U1          | UATC, LLC              |
| EP      | 16873859.9         | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES           |                            | UATC, LLC              |
| DE      | 17760835.3         | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM           | EP3423912 / 602017050228.6 | UATC, LLC              |
| EP      | 21208121           | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM           |                            | UATC, LLC              |
| DE      | 16891890.2         | 12/23/2016  | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE             | EP3416862 / 602016081069.7 | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number              | Current owner/assignor |
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| DE      | 17831590.9         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES                        | EP3481683 / 602017026547.0 | UATC, LLC              |
| DE      | 20201714.1         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES                        | EP3786007 / 602017059387.7 | UATC, LLC              |
| FR      | 17831590.9         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES                        | EP3481683                  | UATC, LLC              |
| GB      | 17831590.9         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES                        | EP3481683                  | UATC, LLC              |
| SE      | 20201714.1         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES                        | EP3786007                  | UATC, LLC              |
| EP      | 18770750.0         | 3/22/2018   | DYNAMIC SENSOR SELECTION FOR SELF-DRIVING VEHICLES         |                            | UATC, LLC              |
| DE      | 17862728.7         | 10/12/2017  | NEURAL NETWORK SYSTEM FOR AUTONOMOUS VEHICLE CONTROL       | EP3526737 / 602017060326.0 | UATC, LLC              |
| DE      | 17844132.5         | 8/14/2017   | HYBRID TRIP PLANNING FOR AUTONOMOUS VEHICLES               | EP3504514 / 602017061859.4 | UATC, LLC              |
| EP      | 18709119.4         | 1/4/2018    | Charge Control System for Mobile Energy Storage Fleet      |                            | UATC, LLC              |
| DE      | 17823305.2         | 12/12/2017  | Vehicle Management System                                  | EP3555866 / 602017061322.3 | UATC, LLC              |
| EP      | 22192877.3         | 12/12/2017  | Vehicle Management System                                  |                            | UATC, LLC              |
| DE      | 18179306.8         | 6/22/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES | EP3418841 / 602018011967.1 | UATC, LLC              |
| EP      | 20217689.7         | 6/22/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES |                            | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number              | Current owner/assignor |
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| FR      | 18179306.8         | 6/22/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                              | EP3418841                  | UATC, LLC              |
| GB      | 18179306.8         | 6/22/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                              | EP3418841                  | UATC, LLC              |
| DE      | 18805085.0         | 5/17/2018   | PATH SEGMENT RISK REGRESSION SYSTEM FOR ON-DEMAND TRANSPORTATION SERVICES               | EP3631366 / 602018064547.0 | UATC, LLC              |
| EP      | 18805085.0         | 5/17/2018   | PATH SEGMENT RISK REGRESSION SYSTEM FOR ON-DEMAND TRANSPORTATION SERVICES               | EP3631366                  | UATC, LLC              |
| EP      | 23212062.6         | 5/17/2018   | PATH SEGMENT RISK REGRESSION SYSTEM FOR ON-DEMAND TRANSPORTATION SERVICES               |                            | UATC, LLC              |
| DE      | 18746049.8         | 6/22/2018   | AUTONOMOUS VEHICLE COLLISION MITIGATION SYSTEMS AND METHODS                             | EP3625633 / 602018043381.3 | UATC, LLC              |
| DE      | 18186821.7         | 8/1/2018    | Multi-Modal Switching on a Collision Mitigation System                                  | EP3444159 / 602018057391.7 | UATC, LLC              |
| EP      | 18742865.1         | 6/15/2018   | SYSTEMS AND METHODS TO OBTAIN FEEDBACK IN RESPONSE TO AUTONOMOUS VEHICLE FAILURE EVENTS |                            | UATC, LLC              |
| DE      | 18743612.6         | 6/18/2018   | HUMAN SUPERVISION OF AN AUTOMATED DRIVING SYSTEM  | EP3646128 / 602018045299.0 | UATC, LLC              |

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| DE      | 18755955.4         | 7/16/2018   | VEHICLE INTERFACE FOR AUTONOMOUS VEHICLE                                       | EP3659002 / 602018018118.0 | UATC, LLC              |
| GB      | 18755955.4         | 7/16/2018   | VEHICLE INTERFACE FOR AUTONOMOUS VEHICLE                                       | EP3659002                  | UATC, LLC              |
| DE      | 18782848.8         | 9/12/2018   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes    | EP3665061 / 602018051882.7 | UATC, LLC              |
| EP      | 23178010.7         | 9/12/2018   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes    |                            | UATC, LLC              |
| DE      | 19748414.0         | 1/30/2019   | SENSOR ASSEMBLY FOR VEHICLES   | EP3732367 / 602019035628.5 | UATC, LLC              |
| DE      | 18782225.9         | 8/20/2018   | SYSTEMS AND METHODS FOR PRIORITIZING OBJECT PREDICTION FOR AUTONOMOUS VEHICLES | EP3673470 / 602018062250.0 | UATC, LLC              |
| EP      | 18782225.9         | 8/20/2018   | SYSTEMS AND METHODS FOR PRIORITIZING OBJECT PREDICTION FOR AUTONOMOUS VEHICLES | EP3673470                  | UATC, LLC              |
| EP      | 18833547.5         | 12/7/2018   | Systems and Methods for Road Surface Dependent Motion Planning                 |                            | UATC, LLC              |
| EP      | 18821944.8         | 12/4/2018   | Multiple Stage Image Based Object Detection and Recognition                    |                            | UATC, LLC              |
| EP      | 18815438.9         | 11/16/2018  | ROTARY DATA COUPLER  |                            | UATC, LLC              |
| EP      | 18792766.0         | 10/3/2018   | METHODS FOR AUTONOMOUS VEHICLE LOCALIZATION                                    |                            | UATC, LLC              |
| DE      | 21210479.8         | 1/9/2019    | SYSTEMS AND METHODS FOR CONTROLLING AN AUTONOMOUS VEHICLE                      | EP3989032 / 602019041296.7 | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number              | Current owner/assignor |
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| DE      | 19703800.3         | 1/9/2019    | SYSTEMS AND METHODS FOR CONTROLLING AN AUTONOMOUS VEHICLE                          | EP3721313 / 602019010093.0 | UATC, LLC              |
| EP      | 21210479.8         | 1/9/2019    | SYSTEMS AND METHODS FOR CONTROLLING AN AUTONOMOUS VEHICLE                          | EP3989032                  | UATC, LLC              |
| DE      | 18825823.0         | 11/21/2018  | Object Interaction Prediction Systems and Methods for Autonomous Vehicles          | EP3714345 / 602018044836.5 | UATC, LLC              |
| EP      | 18836692.6         | 11/15/2018  | Autonomous Vehicle Lane Boundary Detection Systems and Methods                     |                            | UATC, LLC              |
| EP      | 18812566.0         | 11/15/2018  | Lightweight Vehicle Localization Systems and Methods                               |                            | UATC, LLC              |
| DE      | 18799959.4         | 10/19/2018  | OBJECT MOTION PREDICTION AND VEHICLE CONTROL FOR AUTONOMOUS VEHICLES               | EP3704684 /602018058359.9  | UATC, LLC              |
| DE      | 05802442.3         | 4/18/2005   | THREE-DIMENSIONAL ROAD MAP ESTIMATION FROM VIDEO SEQUENCES BY TRACKING PEDESTRIANS | EP1872302 / 602005022943.4 | UATC, LLC              |
| GB      | 5802442.3          | 4/18/2005   | THREE-DIMENSIONAL ROAD MAP ESTIMATION FROM VIDEO SEQUENCES BY TRACKING PEDESTRIANS | EP1872302                  | UATC, LLC              |
| EP      | 19762243.4         | 7/31/2019   | Palette System for Cargo Transport   |                            | UATC, LLC              |
| EP      | 19734216.5         | 6/14/2019   | SYSTEM AND METHOD FOR DETERMINING OBJECT INTENTION THROUGH VISUAL ATTRIBUTES       |                            | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number              | Current owner/assignor |
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| EP      | 19732834.7         | 6/6/2019    | Gridlock Solver for Motion Planning System of an Autonomous Vehicle                              |                            | UATC, LLC              |
| EP      | 20707952.6         | 1/24/2020   | VEHICLE ROUTING WITH LOCAL AND GENERAL ROUTES  |                            | UATC, LLC              |
| DE      | 20718113.2         | 3/23/2020   | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC SENSOR DATA VIA MACHINE LEARNING                    | EP3948794 / 602020007873.8 | UATC, LLC              |
| EP      | 21774163.6         | 2/16/2021   | COMPUTER SYSTEM FOR UTILIZING ULTRASONIC SIGNALS TO IMPLEMENT OPERATIONS FOR AUTONOMOUS VEHICLES |                            | UATC, LLC              |
| EP      | 21713796.7         | 2/26/2021   | AUTONOMOUS VEHICLE COMPUTING SYSTEM WITH PROCESSING ASSURANCE                                    |                            | UATC, LLC              |
| EP      | 21727277.2         | 4/26/2021   | Light Detection and Ranging (Lidar) System   |                            | UATC, LLC              |
| EP      | 21795054.2         | 9/10/2021   | Systems and Methods for Generating Basis Paths for Autonomous Vehicle Motion Control             |                            | UATC, LLC              |
| EP      | 21763186.0         | 8/6/2021    | LIGHT DETECTION AND RANGING (LIDAR) SYSTEM HAVING TRANSMIT OPTICS FOR PRE-COLLIMATION STEERING   |                            | UATC, LLC              |
| EP      | 19750006.9         | 7/25/2019   | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSSTALK  |                            | UATC, LLC              |
| EP      | 24164678.5         | 7/25/2019   | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSSTALK  |                            | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| HK      | 62021024935.0      | 2/5/2021    | METHODS FOR AUTONOMOUS VEHICLE LOCALIZATION                                 |               | UATC, LLC              |
| IL      | 260002             | 12/19/2016  | INTELLIGENT LENS MASKING SYSTEM FOR AN AUTONOMOUS VEHICLE                   | 260002        | UATC, LLC              |
| IL      | 261434             | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM                             | 261434        | UATC, LLC              |
| IL      | 252104             | 5/4/2017    | OBJECT DETECTION FOR AN AUTONOMOUS VEHICLE                                  | 252104        | UATC, LLC              |
| IL      | 256524             | 5/4/2017    | IMPROVED OBJECT DETECTION FOR AN AUTONOMOUS VEHICLE                         | 256524        | UATC, LLC              |
| IL      | 260106             | 6/18/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLE                   | 260106        | UATC, LLC              |
| JP      | 2016-502343        | 3/14/2014   | METHODS, SYSTEMS AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS | 6514681       | UATC, LLC              |
| JP      | 2018509875         | 8/31/2016   | The control system for vehicles which has an autonomous function            | 7012006       | UATC, LLC              |
| JP      | 2018-532388        | 12/20/2016  | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE                          | 6765427       | UATC, LLC              |
| JP      | 2019502186         | 7/13/2017   | SENSOR CLEANING SYSTEM FOR VEHICLES   | 6564546       | UATC, LLC              |
| JP      | 2019-137876        | 7/26/2019   | SENSOR CLEANING SYSTEM FOR VEHICLES   | 6757833       | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| JP      | 2019-520373        | 10/12/2017  | NEURAL NETWORK SYSTEM FOR AUTONOMOUS VEHICLE CONTROL                                 | 6651678       | UATC, LLC              |
| JP      | 2019-531709        | 12/12/2017  | Vehicle Servicing System   | 7158381       | UATC, LLC              |
| JP      | 2019-531719        | 12/12/2017  | Vehicle Management System  | 6945630       | UATC, LLC              |
| JP      | 2021-149270        | 9/14/2021   | Vehicle Management System  | 7139505       | UATC, LLC              |
| JP      | 2019-572474        | 6/22/2018   | AUTONOMOUS VEHICLE COLLISION MITIGATION SYSTEMS AND METHODS                          | 6843277       | UATC, LLC              |
| JP      | 2019-569959        | 6/18/2018   | Computing systems, autonomous vehicles, and computer implementation methods          | 6808078       | UATC, LLC              |
| JP      | 2020-515232        | 9/12/2018   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes          | 7171708       | UATC, LLC              |
| JP      | 2020-510567        | 8/20/2018   | SYSTEMS AND METHODS FOR PRIORITIZING OBJECT PREDICTION FOR AUTONOMOUS VEHICLES       | 7199421       | UATC, LLC              |
| JP      | 2020-512738        | 8/27/2018   | SYSTEMS AND METHODS FOR CHANGING A DESTINATION OF AN AUTONOMOUS VEHICLE IN REAL-TIME | 7328215       | UATC, LLC              |
| JP      | 2020-530478        | 12/4/2018   | The object detection and recognition of multistage image base                        | 7105305       | UATC, LLC              |
| JP      | 2020-526944        | 11/16/2018  | ROTARY DATA COUPLER  | 6908786       | UATC, LLC              |
| JP      | 2021-109911        | 11/16/2018  | ROTARY DATA COUPLER  | 7312790       | UATC, LLC              |

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| JP      | 2008-120580        | 5/2/2008    | USING SEGMENTED CONES FOR FAST, CONSERVATIVE ASSESSMENT OF COLLISION RISK                      | 5694636         | UATC, LLC              |
| JP      | 2008-120581        | 5/2/2008    | TWO-LEVEL GROUPING OF PRINCIPALS FOR A COLLISION WARNING SYSTEM                                | 5662634         | UATC, LLC              |
| JP      | 2008-120582        | 5/2/2008    | HUMAN-MACHINE-INTERFACE (HMI) CUSTOMIZATION BASED ON COLLISION ASSESSMENTS                     | 5460973         | UATC, LLC              |
| JP      | 2020-524819        | 11/5/2018   | Vehicle sensor washing system  | 7012154         | UATC, LLC              |
| JP      | 2020-528314        | 11/21/2018  | Object Interaction Prediction Systems and Methods for Autonomous Vehicles                      | 7150846         | UATC, LLC              |
| JP      | 2019-135337        | 7/23/2019   | OBJECT DETECTION BASED ON LIDAR INTENSITY  | 6676814         | UATC, LLC              |
| JP      | 2022-566025        | 4/26/2021   | Light Detection and Ranging (Lidar) System   |                 | UATC, LLC              |
| JP      | 2023508490         | 8/6/2021    | LIGHT DETECTION AND RANGING (LIDAR) SYSTEM HAVING TRANSMIT OPTICS FOR PRE-COLLIMATION STEERING |                 | UATC, LLC              |
| KR      | 10-2015-7029111    | 3/14/2014   | METHODS, SYSTEMS AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS                    | 10-1803164-0000 | UATC, LLC              |
| KR      | 10-2018-7009172    | 8/31/2016   | Control systems for autonomous vehicles  | 102380973       | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number   | Current owner/assignor |
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| KR      | 10-2018-0072551    | 6/25/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLE          | 10-1963422-0000 | UATC, LLC              |
| KR      | 10-2021-7006296    | 7/25/2019   | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSSTALK                    |                 | UATC, LLC              |
| KR      | 10-2022-7040262    | 4/26/2021   | Lidar system   |                 | UATC, LLC              |
| KR      | 10-2023-7005499    | 8/6/2021    | Lidar system with transmission optics for pre-collimation steering |                 | UATC, LLC              |
| SG      | 11201804158W       | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES                    | 11201804158W    | UATC, LLC              |
| SG      | 10202111363X       | 12/8/2016   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES                    |                 | UATC, LLC              |
| SG      | 11201807249Y       | 3/2/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM                    | 11201807249Y    | UATC, LLC              |
| SG      | 11201807002T       | 12/23/2016  | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE                      | 11201807002T    | UATC, LLC              |
| SG      | 11201908368R       | 3/22/2018   | DYNAMIC SENSOR SELECTION FOR SELF-DRIVING VEHICLES                 | 11201908368R    | UATC, LLC              |
| SG      | 11201905372S       | 12/12/2017  | Vehicle Servicing System   | 11201905372S    | UATC, LLC              |
| SG      | 10201911809W       | 12/12/2017  | Vehicle Servicing System   | 10201911809W    | UATC, LLC              |
| SG      | 11201905385R       | 12/12/2017  | Vehicle Management System  | 11201905385R    | UATC, LLC              |
| SG      | 10201911758Y       | 12/12/2017  | Vehicle Management System  | 10201911758Y    | UATC, LLC              |
| SG      | 10201911769U       | 12/12/2017  | Vehicle Management System  | 10201911769U    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| SG      | 10201911787Y       | 12/12/2017  | Vehicle Management System  | 10201911787Y  | UATC, LLC              |
| SG      | 11201907791W       | 2/19/2018   | Vehicle Control System   | 11201907791W  | UATC, LLC              |
| SG      | 10201806510U       | 7/30/2018   | Multi-Model Switching on a Collision Mitigation System                               | 10201806510U  | UATC, LLC              |
| SG      | 11201912884U       | 6/22/2018   | AUTONOMOUS VEHICLE COLLISION MITIGATION SYSTEMS AND METHODS                          |               | UATC, LLC              |
| SG      | 11202001848Y       | 8/27/2018   | SYSTEMS AND METHODS FOR CHANGING A DESTINATION OF AN AUTONOMOUS VEHICLE IN REAL-TIME | 11202001848Y  | UATC, LLC              |
| SG      | 10201907051S       | 7/31/2019   | OBJECT DETECTION BASED ON LIDAR INTENSITY  |               | UATC, LLC              |
| US      | 16/366,543         | 3/27/19     | GEOREFERENCED TRAJECTORY ESTIMATION SYSTEM   | 11,340,632    | UATC, LLC              |
| US      | 62/648,541         | 3/27/18     | GEOREFERENCED TRAJECTORY SYSTEM  |               | UATC, LLC              |
| US      | 15/789,425         | 10/20/17    | Parking Location Prediction  |               | UATC, LLC              |
| US      | 62/562,866         | 9/25/17     | Automatic Parking Lane Prediction  |               | UATC, LLC              |
| US      | 15/793,700         | 10/25/17    | Determining Autonomous Vehicle Routes  | 10,656,645    | UATC, LLC              |
| US      | 16/866,701         | 5/5/20      | Determining Autonomous Vehicle Routes  |               | UATC, LLC              |
| US      | 62/570,262         | 10/10/17    | Canonical Route Selection  |               | UATC, LLC              |
| US      | 15/914,713         | 3/7/18      | Low Quality Pose Lane Associator   | 10,824,162    | UATC, LLC              |
| US      | 15/914,740         | 3/7/18      | Low Quality Pose   | 10,551,850    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/867,794         | 5/6/20      | Low Quality Pose Lane Associator                                      | 11,585,935    | UATC, LLC              |
| US      | 62/613,273         | 1/3/18      | Low Quality Pose Lane Associator                                      |               | UATC, LLC              |
| US      | 62/613,248         | 1/3/18      | Low Quality Pose  |               | UATC, LLC              |
| US      | 15/789,334         | 10/20/17    | Determining Routes for Autonomous Vehicles                            | 10,768,621    | UATC, LLC              |
| US      | 16/947,565         | 8/6/20      | Determining Routes for Autonomous Vehicles                            | 11,782,439    | UATC, LLC              |
| US      | 62/562,879         | 9/25/17     | Determining and Providing Alternative Routes to Users                 |               | UATC, LLC              |
| US      | 15/853,448         | 12/22/17    | SYSTEMS, DEVICES, AND METHODS FOR AUTONOMOUS VEHICLE LOCALIZATION     | 10,684,372    | UATC, LLC              |
| US      | 62/567,439         | 10/3/17     | SYSTEMS, DEVICES, AND METHODS FOR IMPROVED AUTONOMOUS VEHICLE CONTROL |               | UATC, LLC              |
| WO      | PCT/US2018/054124  | 10/3/18     | METHODS FOR AUTONOMOUS VEHICLE LOCALIZATION                           |               | UATC, LLC              |
| US      | 15/987,517         | 5/23/18     | VEHICLE POSE SYSTEM   | 10,782,411    | UATC, LLC              |
| US      | 62/617,006         | 1/12/18     | VEHICLE POSE SYSTEM   |               | UATC, LLC              |
| US      | 15/903,399         | 2/23/18     | Map Creation From Hybrid Data   | 11,073,400    | UATC, LLC              |
| US      | 17/305,275         | 7/2/21      | Map Creation From Hybrid Data   | 11,621,025    | UATC, LLC              |
| US      | 62/582,731         | 11/7/17     | Map Creation From Hybrid Data   |               | UATC, LLC              |
| US      | 15/903,435         | 2/23/18     | Hybrid Maps - Boundary Transition                                     |               | UATC, LLC              |
| US      | 62/590,074         | 11/22/17    | Hybrid Maps - Boundary Transition                                     |               | UATC, LLC              |
| US      | 16/183,012         | 11/7/18     | Map automation?lane classification                                    | 11,216,004    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/582,764         | 11/7/17     | Map Automation Lane Classification               |               | UATC, LLC              |
| US      | 16/114,985         | 8/28/18     | DUAL OUTPUT POWER SYSTEM FOR VEHICLES            | 11,495,964    | UATC, LLC              |
| US      | 62/646,604         | 3/22/18     | DUAL OUTPUT POWER SYSTEM FOR NON-HYBRID VEHICLES |               | UATC, LLC              |
| US      | 15/928,739         | 3/22/18     | DISENGAGING AUTONOMOUS CONTROL OF VEHICLE        | 10,647,329    | UATC, LLC              |
| US      | 62/597,805         | 12/12/17    | DISENGAGING AUTONOMOUS CONTROL OF VEHICLE        |               | UATC, LLC              |
| US      | 15/987,534         | 5/23/18     | MAP SELECTION FOR VEHICLE POSE SYSTEM            | 11,073,403    | UATC, LLC              |
| US      | 17/305,375         | 7/6/21      | MAP SELECTION FOR VEHICLE POSE SYSTEM            | 11,668,573    | UATC, LLC              |
| US      | 18/309,256         | 4/28/23     | MAP SELECTION FOR VEHICLE POSE SYSTEM            |               | UATC, LLC              |
| US      | 62/617,012         | 1/12/18     | MAP SELECTION FOR VEHICLE POSE SYSTEM            |               | UATC, LLC              |
| US      | 15/913,372         | 3/6/18      | Mapped Driving Paths for Autonomous Vehicle      | 10,795,367    | UATC, LLC              |
| US      | 16/948,271         | 9/10/20     | MAPPED DRIVING PATHS FOR AUTONOMOUS VEHICLE      | 11,454,973    | UATC, LLC              |
| US      | 62/616,114         | 1/11/18     | Driving Path Creation                            |               | UATC, LLC              |
| US      | 15/891,017         | 2/7/18      | Submap Geographic Projections                    | 10,712,168    | UATC, LLC              |
| US      | 16/946,971         | 7/13/20     | Submap Geographic Projections                    | 11,340,093    | UATC, LLC              |
| US      | 17/660,543         | 4/25/22     | Submap Geographic Projections                    |               | UATC, LLC              |
| US      | 62/611,315         | 12/28/17    | Submap Geographic Projections                    |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/919,917         | 3/13/18     | AUTONOMOUS VEHICLE INTEGRATED USER ALERT AND ENVIRONMENTAL LABELING | 11,493,920    | UATC, LLC              |
| US      | 15/919,926         | 3/13/18     | CONTEXT-DEPENDENT ALERTNESS MONITOR IN AN AUTONOMOUS VEHICLE        | 10,915,101    | UATC, LLC              |
| US      | 62/625,868         | 2/2/18      | AUTONOMOUS VEHICLE INTEGRATED USER ALERT AND ENVIRONMENTAL LABELING |               | UATC, LLC              |
| US      | 16/191,735         | 11/15/18    | "Matching Adversarial Networks"                                     |               | UATC, LLC              |
| US      | 62/586,818         | 11/15/17    | Matching Adversarial Networks                                       |               | UATC, LLC              |
| US      | 16/153,298         | 10/5/18     | DETERMINING VEHICLE LOAD CENTER OF MASS                             | 11,125,640    | UATC, LLC              |
| US      | 17/446,683         | 9/1/21      | DETERMINING VEHICLE LOAD CENTER OF MASS                             | 11,796,414    | UATC, LLC              |
| US      | 62/644,946         | 3/19/18     | DETERMINING VEHICLE LOAD CENTER OF MASS                             |               | UATC, LLC              |
| US      | 16/012,226         | 6/19/18     | DRIVETRAIN COMPENSATION FOR AUTONOMOUS VEHICLES                     |               | UATC, LLC              |
| US      | 62/644,952         | 3/19/18     | DRIVETRAIN COMPENSATION FOR AUTONOMOUS VEHICLES                     |               | UATC, LLC              |
| US      | 16/153,312         | 10/5/18     | DETERMINING VEHICLE SLOPE AND USES THEREOF                          |               | UATC, LLC              |
| US      | 62/644,956         | 3/19/18     | DETERMINING VEHICLE SLOPE AND USES THEREOF                          |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 10/104,823         | 3/22/02     | METHOD FOR SIMULTANEOUS VISUAL TRACKING OF MULTIPLE BODIES IN A CLOSED STRUCTURED ENVIRONMENT | 6,950,123     | UATC, LLC              |
| US      | 10/581,333         | 4/18/05     | THREE-DIMENSIONAL ROAD MAP ESTIMATION FROM VIDEO SEQUENCES BY TRACKING PEDESTRIANS            | 7,751,589     | UATC, LLC              |
| WO      | PCT/RU2005/000209  | 4/18/05     | THREE-DIMENSIONAL ROAD MAP ESTIMATION FROM VIDEO SEQUENCES BY TRACKING PEDESTRIANS            |               | UATC, LLC              |
| US      | 09/003,389         | 1/6/98      | METHOD OF DETERMINING RELATIVE CAMERA ORIENTATION POSITION TO CREATE 3-D VISUAL IMAGES        | 6,094,215     | UATC, LLC              |
| US      | 09/205,895         | 12/4/98     | VIRTUALIZATION OF INTERACTIVE COMPUTER INPUT  | 6,433,774     | UATC, LLC              |
| US      | 62/672,335         | 5/16/18     | AUTONOMOUS VEHICLE PARKING BRAKE ENGAGEMENT   |               | UATC, LLC              |
| US      | 16/125,205         | 9/7/18      | Global and Local Navigation for Self-Driving  | 11,333,503    | UATC, LLC              |
| US      | 16/125,000         | 9/7/18      | Global and Local Navigation for Self-Driving  | 11,255,679    | UATC, LLC              |
| US      | 62/660,014         | 4/19/18     | Global and Local Navigation for Self-Driving  |               | UATC, LLC              |
| US      | 16/353,871         | 3/14/19     | Structured Prediction Crosswalk Generation  |               | UATC, LLC              |
| US      | 17/444,506         | 8/5/21      | Structured Prediction Crosswalk Generation  | 11,681,746    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 62/642,835         | 3/14/18     | Learning to Map Cross-walks by Driving                      |               | UATC, LLC              |
| US      | 16/173,633         | 10/29/18    | AUTONOMOUS VEHICLE WAYPOINT ROUTING                         | 11,441,913    | UATC, LLC              |
| US      | 62/719,982         | 8/20/18     | AUTONOMOUS VEHICLE ROUTING                                  |               | UATC, LLC              |
| US      | 16/173,654         | 10/29/18    | AUTONOMOUS VEHICLE ROUTING WITH ROUTE EXTENSION             | 11,397,089    | UATC, LLC              |
| US      | 17/810,752         | 7/5/22      | AUTONOMOUS VEHICLE ROUTING WITH ROUTE EXTENSION             | 11,781,872    | UATC, LLC              |
| US      | 62/697,701         | 7/13/18     | AUTONOMOUS VEHICLE ROUTING WITH ROUTE EXTENSION             |               | UATC, LLC              |
| US      | 16/166,950         | 10/22/18    | OBJECT DETECTION BASED ON LIDAR INTENSITY                   | 10,598,791    | UATC, LLC              |
| US      | 62/712,479         | 7/31/18     | OBJECT DETECTION BASED ON LIDAR INTENSITY                   |               | UATC, LLC              |
| US      | 16/437,827         | 6/11/19     | AUTONOMOUS VEHICLE LOCALIZATION USING A LIDAR INTENSITY MAP | 11,726,208    | UATC, LLC              |
| US      | 62/685,875         | 6/15/18     | LEARNING TO LOCALIZE USING A LIDAR INTENSITY MAP            |               | UATC, LLC              |
| US      | 16/210,967         | 12/5/18     | BRAKE PRELOAD SYSTEM FOR AUTONOMOUS VEHICLES                | 11,285,927    | UATC, LLC              |
| US      | 17/653,101         | 3/1/22      | BRAKE PRELOAD SYSTEM FOR AUTONOMOUS VEHICLES                | 11,760,319    | UATC, LLC              |
| US      | 18/364,274         | 8/2/23      | BRAKE PRELOAD SYSTEM FOR AUTONOMOUS VEHICLES                |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/736,767         | 9/26/18     | BRAKE PRELOAD SYSTEM FOR AUTONOMOUS VEHICLES             |               | UATC, LLC              |
| US      | 16/727,654         | 12/26/19    | All Mover Priors   | 11,427,225    | UATC, LLC              |
| US      | 16/727,637         | 12/26/19    | All Mover Priors   |               | UATC, LLC              |
| US      | 16/727,680         | 12/26/19    | Missing Traffic Face Detector                            | 11,250,697    | UATC, LLC              |
| US      | 17/647,815         | 1/12/22     | Missing Traffic Face Detector                            |               | UATC, LLC              |
| US      | 16/727,695         | 12/26/19    | Automated Bump and/or Depression Detection in a Roadway  |               | UATC, LLC              |
| US      | 17/805,362         | 6/3/22      | Automated Bump and/or Depression Detection in a Roadway  |               | UATC, LLC              |
| US      | 16/731,816         | 12/31/19    | Automated Road Edge Boundary Detection                   | 11,288,521    | UATC, LLC              |
| US      | 17/652,384         | 2/24/22     | Automated Road Edge Boundary Detection                   | 11,790,668    | UATC, LLC              |
| US      | 16/536,925         | 8/9/19      | LOCAL MAP SERVER AND MULTIPLEXER                         |               | UATC, LLC              |
| US      | 62/795,728         | 1/23/19     | LOCAL MAP SERVER AND MULTIPLEXER                         |               | UATC, LLC              |
| US      | 16/366,561         | 3/27/19     | LOG TRAJECTORY ESTIMATION FOR GLOBALLY CONSISTENT MAPS   | 11,237,004    | UATC, LLC              |
| US      | 62/797,638         | 1/28/19     | LOG TRAJECTORY ESTIMATION FOR GLOBALLY CONSISTENT MAPS   |               | UATC, LLC              |
| US      | 16/752,242         | 1/24/20     | AUTONOMOUS VEHICLE ROUTING WITH LOCAL AND GENERAL ROUTES | 11,435,200    | UATC, LLC              |
| US      | 17/929,610         | 9/2/22      | AUTONOMOUS VEHICLE ROUTING WITH LOCAL AND GENERAL ROUTES |               | UATC, LLC              |
| US      | 62/796,840         | 1/25/19     | AUTONOMOUS VEHICLE ROUTING                               |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| WO      | PCT/US2020/015066  | 1/24/20     | VEHICLE ROUTING WITH LOCAL AND GENERAL ROUTES                   |               | UATC, LLC              |
| US      | 16/538,275         | 8/12/19     | DEPART CONSTRAINTS IMPLEMENTATION IN AUTONOMOUS VEHICLE ROUTING | 11,287,818    | UATC, LLC              |
| US      | 17/652,818         | 2/28/22     | DEPART CONSTRAINTS IMPLEMENTATION IN AUTONOMOUS VEHICLE ROUTING |               | UATC, LLC              |
| US      | 62/795,734         | 1/23/19     | DEPART CONSTRAINTS IMPLEMENTATION IN AUTONOMOUS VEHICLE ROUTING |               | UATC, LLC              |
| US      | 16/536,895         | 8/9/19      | GROUND INTENSITY LIDAR LOCALIZER                                | 11,493,635    | UATC, LLC              |
| US      | 18/046,789         | 10/14/22    | GROUND INTENSITY LIDAR LOCALIZER                                | 11,852,729    | UATC, LLC              |
| US      | 18/520,416         | 11/27/23    | GROUND INTENSITY LIDAR LOCALIZER                                |               | UATC, LLC              |
| US      | 62/835,207         | 4/17/19     | GROUND INTENSITY LIDAR LOCALIZER                                |               | UATC, LLC              |
| US      | 16/839,208         | 4/3/20      | AUTONOMOUS VEHICLE CONTROL SYSTEM TESTING                       |               | UATC, LLC              |
| US      | 62/829,583         | 4/4/19      | AUTONOMOUS VEHICLE CONTROL SYSTEM TESTING                       |               | UATC, LLC              |
| US      | 16/460,421         | 7/2/19      | DYNAMIC MATRIX FILTER FOR VEHICLE IMAGE SENSOR                  | 11,256,013    | UATC, LLC              |
| US      | 17/648,176         | 1/17/22     | DYNAMIC MATRIX FILTER FOR VEHICLE IMAGE SENSOR                  |               | UATC, LLC              |
| US      | 62/824,973         | 3/27/19     | DYNAMIC MATRIX FILTER FOR VEHICLE IMAGE SENSOR                  |               | UATC, LLC              |
| US      | 16/774,566         | 1/28/20     | SCAFFOLDS FOR GLOBALLY CONSISTENT MAPS                          | 11,435,194    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/797,693         | 1/28/19     | SCAFFOLDS FOR GLOBALLY CONSISTENT MAPS   |               | UATC, LLC              |
| US      | 16/849,586         | 4/15/20     | DEVICES FOR AUTONOMOUS VEHICLE USER POSITIONING AND SUPPORT                    |               | UATC, LLC              |
| US      | 62/834,337         | 4/15/19     | DEVICES FOR AUTONOMOUS VEHICLE USER SUPPORT                                    |               | UATC, LLC              |
| US      | 17/247,497         | 12/14/20    | MULTI-BEAM LIDAR INTENSITY CALIBRATION BY INTERPOLATING LEARNED RESPONSE CURVE |               | UATC, LLC              |
| US      | 62/947,253         | 12/12/19    | MULTI-BEAM LIDAR INTENSITY CALIBRATION BY INTERPOLATING LEARNED RESPONSE CURVE |               | UATC, LLC              |
| US      | 63/018,447         | 4/30/20     | MULTI-BEAM LIDAR INTENSITY CALIBRATION BY INTERPOLATING LEARNED RESPONSE CURVE |               | UATC, LLC              |
| US      | 17/302,377         | 4/30/21     | VEHICLE ROUTING WITH PROBABILITY-BASED COSTING                                 |               | UATC, LLC              |
| US      | 63/018,087         | 4/30/20     | VEHICLE ROUTING WITH RISK BASED COSTING  |               | UATC, LLC              |
| US      | 62/982,693         | 2/27/20     | Traffic Face Detector  |               | UATC, LLC              |
| US      | 63/083,632         | 9/25/20     | OBJECT GEOLOCATION TECHNIQUES  |               | UATC, LLC              |
| US      | 63/198,799         | 11/13/20    | Detection Embeddings for Tracking  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 16/752,199         | 1/24/20     | ROUTING MULTIPLE AUTONOMOUS VEHICLES USING LOCAL AND GENERAL ROUTE PLANNING |               | UATC, LLC              |
| US      | 62/796,873         | 1/25/19     | AUTONOMOUS VEHICLE ROUTING  |               | UATC, LLC              |
| US      | 13/826,155         | 3/14/2013   | LIDAR SCANNER   | 9,470,520     | UATC, LLC              |
| US      | 15/265,533         | 9/14/2016   | LIDAR SCANNER   | 10,473,763    | UATC, LLC              |
| US      | 16/592,459         | 10/3/2019   | LIDAR SENSOR  | 11,650,291    | UATC, LLC              |
| US      | 15/279,165         | 9/28/2016   | AUTONOMOUS VEHICLE WITH INDEPENDENT AUXILIARY CONTROL UNITS                 | 10,061,313    | UATC, LLC              |
| US      | 16/031,188         | 7/10/2018   | AUTONOMOUS VEHICLE WITH INDEPENDENT AUXILIARY CONTROL UNITS                 | 11,294,371    | UATC, LLC              |
| US      | 17/682,133         | 2/28/2022   | AUTONOMOUS VEHICLE WITH INDEPENDENT AUXILIARY CONTROL UNITS                 | 11,599,112    | UATC, LLC              |
| US      | 18/162,249         | 1/31/2023   | AUTONOMOUS VEHICLE WITH INDEPENDENT AUXILIARY CONTROL UNITS                 | 11,782,437    | UATC, LLC              |
| US      | 62/233,930         | 9/28/2015   | AUTOMATED VEHICLE WITH INDEPENDENT BYPASS RESPONSE                          |               | UATC, LLC              |
| US      | 15/697,044         | 9/6/2017    | Systems and Methods to Test an Autonomous Vehicle                           | 10,431,023    | UATC, LLC              |
| US      | 16/585,482         | 9/27/2019   | Systems and Methods to Test an Autonomous Vehicle                           | 11,257,309    | UATC, LLC              |
| US      | 62/548,061         | 8/21/2017   | Systems and Methods to Test an Autonomous Vehicle                           |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 15/684,865         | 8/23/2017   | Machine Learning for Predicting Locations of Objects Perceived by Autonomous Vehicles                         | 10,579,063    | UATC, LLC              |
| US      | 62/535,343         | 7/21/2017   | Machine Learning for Predicting Locations of Objects Perceived by Autonomous Vehicles                         |               | UATC, LLC              |
| US      | 15/689,251         | 8/29/2017   | Systems and Methods of Controlling an Autonomous Vehicle Using an Enhanced Trajectory Following Configuration | 10,809,719    | UATC, LLC              |
| US      | 15/726,498         | 10/6/2017   | Systems and Methods for Performing Lane Changes Around Obstacles  |               | UATC, LLC              |
| US      | 62/549,056         | 8/23/2017   | Systems and Methods for Performing Lane Changes Around Static Vehicles  |               | UATC, LLC              |
| US      | 15/672,782         | 8/9/2017    | Systems and Methods to Enable an Autonomous Mode of an Autonomous Vehicle                                     | 10,466,698    | UATC, LLC              |
| US      | 15/672,854         | 8/9/2017    | Systems and Methods to Boot a Computing System of an Autonomous Vehicle                                       | 10,423,125    | UATC, LLC              |
| US      | 15/810,296         | 11/13/2017  | Systems and Methods to Adjust Autonomous Vehicle Parameters in Response to Passenger Feedback                 | 10,532,749    | UATC, LLC              |
| US      | 62/544,432         | 8/11/2017   | Systems and Methods to Adjust Autonomous Vehicle Parameters in Response to Passenger Feedback                 |               | UATC, LLC              |
| US      | 15/985,820         | 5/22/2018   | Systems and Methods for Controlling an Autonomous Vehicle with Occluded Sensor Zones                          | 11,625,045    | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 18/295,491         | 4/4/2023    | Systems and Methods for Controlling an Autonomous Vehicle with Occluded Sensor Zones      |               | UATC, LLC              |
| US      | 62/552,515         | 8/31/2017   | Systems and Methods for Controlling an Autonomous Vehicle Including Occluded Sensor Zones |               | UATC, LLC              |
| US      | 15/783,005         | 10/13/2017  | Object Motion Prediction and Autonomous Vehicle Control                                   | 10,656,657    | UATC, LLC              |
| US      | 16/122,455         | 9/5/2018    | Object Motion Prediction and Autonomous Vehicle Control                                   | 11,112,796    | UATC, LLC              |
| US      | 17/466,705         | 9/3/2021    | Object Motion Prediction and Autonomous Vehicle Control                                   | 11,835,951    | UATC, LLC              |
| US      | 62/542,506         | 8/8/2017    | Object Motion Prediction and Autonomous Vehicle Control                                   |               | UATC, LLC              |
| US      | 15/718,003         | 9/28/2017   | Vehicle Interface For Autonomous Vehicle  | 10,620,634    | UATC, LLC              |
| US      | 62/549,024         | 8/23/2017   | Vehicle Interface For Autonomous Vehicle  |               | UATC, LLC              |
| US      | 15/276,321         | 9/26/2016   | AUTONOMOUS VEHICLE OPERATED WITH SAFETY AUGMENTATION                                      | 10,139,828    | UATC, LLC              |
| US      | 16/165,623         | 10/19/2018  | AUTONOMOUS VEHICLE OPERATED WITH SAFETY AUGMENTATION                                      | 11,022,977    | UATC, LLC              |
| US      | 17/333,975         | 5/28/2021   | AUTONOMOUS VEHICLE OPERATED WITH SAFETY AUGMENTATION                                      |               | UATC, LLC              |
| US      | 62/232,435         | 9/24/2015   | AUTONOMOUS VEHICLE OPERATED WITH SAFETY AUGMENTATION                                      |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/126,533         | 9/10/2018   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes           | 11,009,874    | UATC, LLC              |
| US      | 17/322,231         | 5/17/2021   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes           | 11,307,579    | UATC, LLC              |
| US      | 17/695,055         | 3/15/2022   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes           |               | UATC, LLC              |
| US      | 18/481,683         | 10/5/2023   | Fault-Tolerant Control of an Autonomous Vehicle with Multiple Control Lanes           |               | UATC, LLC              |
| US      | 62/558,523         | 9/14/2017   | Systems and Methods for Controlling an Autonomous Vehicle with Multiple Control Lanes |               | UATC, LLC              |
| US      | 15/674,377         | 8/10/2017   | Configuration of Vehicle Compartments   | 10,118,577    | UATC, LLC              |
| US      | 16/152,657         | 10/5/2018   | Configuration of Vehicle Compartments   | 10,946,821    | UATC, LLC              |
| US      | 17/175,167         | 2/12/2021   | Configuration of Vehicle Compartments   | 11,565,639    | UATC, LLC              |
| US      | 15/797,365         | 10/30/2017  | Sensor Control System for Autonomous Vehicle  | 10,843,669    | UATC, LLC              |
| US      | 62/564,322         | 9/28/2017   | Sensor Control System for Autonomous Vehicle  |               | UATC, LLC              |
| US      | 15/885,308         | 1/31/2018   | SENSOR ASSEMBLY FOR VEHICLES  | 10,914,820    | UATC, LLC              |
| US      | 17/145,943         | 1/11/2021   | SENSOR ASSEMBLY FOR VEHICLES  | 11,747,448    | UATC, LLC              |
| US      | 15/793,291         | 10/25/2017  | Anomaly Detection Systems and Methods for Autonomous Vehicles                         |               | UATC, LLC              |
| US      | 62/567,533         | 10/3/2017   | Anomaly Detection Systems and Methods for Autonomous Vehicles                         |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 15/811,865         | 11/14/2017  | Systems and Methods for Prioritizing Object Prediction for Autonomous Vehicles          | 10,216,189    | UATC, LLC              |
| US      | 16/211,376         | 12/6/2018   | Systems and Methods for Prioritizing Object Prediction for Autonomous Vehicles          | 11,099,569    | UATC, LLC              |
| US      | 17/408,728         | 8/23/2021   | Systems and Methods for Prioritizing Object Prediction for Autonomous Vehicles          | 11,710,303    | UATC, LLC              |
| US      | 18/328,260         | 6/2/2023    | Systems and Methods for Prioritizing Object Prediction for Autonomous Vehicles          |               | UATC, LLC              |
| US      | 62/549,407         | 8/23/2017   | Systems and Methods for Prioritizing Object Prediction for Autonomous Vehicles          |               | UATC, LLC              |
| US      | 15/992,498         | 5/30/2018   | Systems and Methods for Object Detection at Various Ranges Using Multiple Range Imagery | 10,768,628    | UATC, LLC              |
| US      | 62/597,450         | 12/12/2017  | Systems and Methods for Object Detection at Various Ranges Using Multiple Range Imagery |               | UATC, LLC              |
| US      | 16/010,281         | 6/15/2018   | SENSOR CONFIGURATION FOR AN AUTONOMOUS SEMI-TRUCK                                       |               | UATC, LLC              |
| US      | 62/517,836         | 6/9/2017    | FIELD OF VIEW CONFIGURATION OPTIONS   |               | UATC, LLC              |
| US      | 62/525,192         | 6/27/2017   | SENSOR CONFIGURATION FOR PROVIDING FIELD OF VIEW FOR AUTONOMOUSLY OPERATING SEMI-TRUCKS |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 15/883,889         | 1/30/2018   | INTERMEDIATE MOUNTING COMPONENT AND SENSOR SYSTEM FOR A MANSFIELD BAR OF A CARGO TRAILER | 10,871,780    | UATC, LLC              |
| US      | 15/883,941         | 1/30/2018   | FUSED SENSOR VIEW FOR SELF-DRIVING TRUCK   | 10,761,534    | UATC, LLC              |
| US      | 15/640,289         | 6/30/2017   | AUTONOMOUS VEHICLE CONTROL USING SUBMAPS   | 10,871,782    | UATC, LLC              |
| US      | 15/640,296         | 6/30/2017   | SYSTEM AND METHOD FOR MANAGING SUBMAPS FOR CONTROLLING AUTONOMOUS VEHICLES               | 10,739,786    | UATC, LLC              |
| US      | 15/640,313         | 6/30/2017   | AUTONOMOUS VEHICLE LOCALIZATION USING SUBMAPS  |               | UATC, LLC              |
| US      | 15/640,334         | 6/30/2017   | AUTONOMOUS VEHICLE LOCALIZATION USING PASSIVE IMAGE DATA                                 | 10,474,162    | UATC, LLC              |
| US      | 15/640,340         | 6/30/2017   | AUTONOMOUS VEHICLE LOCALIZATION USING IMAGE ANALYSIS AND MANIPULATION                    | 10,678,262    | UATC, LLC              |
| US      | 15/640,355         | 6/30/2017   | DETECTING DEVIATIONS IN DRIVING BEHAVIOR FOR AUTONOMOUS VEHICLES                         | 10,852,744    | UATC, LLC              |
| US      | 62/357,903         | 7/1/2016    | SUBMAP SYSTEM FOR USE IN AUTONOMOUSLY OPERATING VEHICLES                                 |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 62/412,041         | 10/24/2016  | SUBMAP SYSTEM FOR USE IN AUTONOMOUSLY OPERATING VEHICLES                              |               | UATC, LLC              |
| US      | 15/786,778         | 10/18/2017  | System for Actively Monitoring the Steering Angle of a Vehicle Using a Kingpin Sensor | 10,654,522    | UATC, LLC              |
| US      | 62/555,356         | 9/7/2017    | System for Actively Monitoring the Steering Angle of a Vehicle Using a Kingpin Sensor |               | UATC, LLC              |
| US      | 15/992,346         | 5/30/2018   | Systems and Methods for Determining Tractor-Trailer Angles and Distances              |               | UATC, LLC              |
| US      | 62/577,426         | 10/26/2017  | Systems and Methods for Determining Tractor-Trailer Angles and Distances              |               | UATC, LLC              |
| US      | 15/699,473         | 9/8/2017    | Autonomous Vehicle Hybrid Simulation Testing  | 10,852,721    | UATC, LLC              |
| US      | 62/549,613         | 8/24/2017   | Autonomous Vehicle Hybrid Simulation Testing  |               | UATC, LLC              |
| US      | 15/715,333         | 9/26/2017   | Systems and Methods to Manage Devices of an Autonomous Vehicle                        |               | UATC, LLC              |
| US      | 62/554,506         | 9/5/2017    | Systems and Methods to Manage Devices of an Autonomous Vehicle                        |               | UATC, LLC              |
| US      | 15/784,684         | 10/16/2017  | Systems and Methods for Low-Latency Braking Action for an Autonomous Vehicle          | 10,654,453    | UATC, LLC              |
| US      | 62/549,355         | 8/23/2017   | Systems and Methods for Low-Latency Braking Action for an Autonomous Vehicle          |               | UATC, LLC              |
| US      | 15/795,632         | 10/27/2017  | Orientation Determination in Object Detection and Tracking for Autonomous Vehicles    |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/555,816         | 9/8/2017    | Orientation Determination in Object Detection and Tracking for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 62/516,531         | 6/7/2017    | 3D Graph Neural Networks for RGBD Semantic Segmentation                              |               | UATC, LLC              |
| US      | 15/794,547         | 10/26/2017  | Systems and Methods for Changing a Destination of an Autonomous Vehicle in Real-Time | 10,725,473    | UATC, LLC              |
| US      | 16/939,590         | 7/27/2020   | Systems and Methods for Changing a Destination of an Autonomous Vehicle in Real-Time | 11,520,339    | UATC, LLC              |
| US      | 62/553,240         | 9/1/2017    | Systems and Methods for Changing a Destination of an Autonomous Vehicle in Real-Time |               | UATC, LLC              |
| US      | 15/862,757         | 1/5/2018    | Systems and Methods For Autonomous Vehicle Lane Change Control                       | 10,618,519    | UATC, LLC              |
| US      | 62/582,005         | 11/6/2017   | Systems and Methods for Autonomous Vehicle Lane Change Control                       |               | UATC, LLC              |
| US      | 15/791,646         | 10/24/2017  | Autonomous Vehicles Featuring Machine-Learned Yield Model                            | 10,019,011    | UATC, LLC              |
| US      | 16/003,543         | 6/8/2018    | Autonomous Vehicles Featuring Machine-Learned Yield Model                            | 11,175,671    | UATC, LLC              |
| US      | 17/521,464         | 11/8/2021   | Autonomous Vehicles Featuring Machine-Learned Yield Model                            | 11,822,337    | UATC, LLC              |
| US      | 18/488,700         | 10/17/2023  | Autonomous Vehicles Featuring Machine-Learned Yield Model                            |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/569,718         | 10/9/2017   | Autonomous Vehicles Featuring Machine-Learned Yield Model                |               | UATC, LLC              |
| US      | 15/640,364         | 6/30/2017   | STATIC OBJECT DETECTION FOR OPERATING AUTONOMOUS VEHICLE                 |               | UATC, LLC              |
| US      | 15/640,370         | 6/30/2017   | PERCEPTION SYSTEM FOR AUTONOMOUS VEHICLE                                 | 10,719,083    | UATC, LLC              |
| US      | 15/722,346         | 10/2/2017   | Power and Thermal Management Systems and Methods for Autonomous Vehicles | 11,430,331    | UATC, LLC              |
| US      | 17/893,829         | 8/23/2022   | Power and Thermal Management Systems and Methods for Autonomous Vehicles | 11,842,639    | UATC, LLC              |
| US      | 18/501,618         | 11/3/2023   | Power and Thermal Management Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |
| US      | 62/555,895         | 9/8/2017    | Power and Thermal Management Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |
| US      | 15/834,691         | 12/7/2017   | Deterministic Simulation Framework for Autonomous Vehicle Testing        | 10,885,240    | UATC, LLC              |
| US      | 62/580,703         | 11/2/2017   | Deterministic Simulation Framework for Autonomous Vehicle Testing        |               | UATC, LLC              |
| US      | 15/700,466         | 9/11/2017   | Autonomous Vehicles Featuring Vehicle Intention System                   | 10,629,080    | UATC, LLC              |
| US      | 16/851,842         | 4/17/2020   | Autonomous Vehicles Featuring Vehicle Intention System                   | 11,288,963    | UATC, LLC              |
| US      | 62/552,574         | 8/31/2017   | Autonomous Vehicles Featuring Vehicle Intention System                   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 13/135,862         | 7/15/2011   | GPS/IMU/Video/Radar Absolute/Relative Positioning Communication/Computation Sensor Platform for Automotive Safety Applications | 8,639,426     | UATC, LLC              |
| US      | 14/099,271         | 12/6/2013   | GNSS/IMU Positioning, Communication, and Computation Platforms for Automotive Safety Applications                              | 9,099,003     | UATC, LLC              |
| US      | 61/399,613         | 7/15/2010   | GPS/IMU/Video/Radar Absolute/Relative Positioning Communication Sensor Platform for Automotive Safety Applications             |               | UATC, LLC              |
| US      | 16/054,499         | 8/3/2018    | Systems and Methods for Road Surface Dependent Motion Planning   | 11,260,875    | UATC, LLC              |
| US      | 62/595,693         | 12/7/2017   | Systems and Methods for Road Surface Dependent Motion Planning   |               | UATC, LLC              |
| US      | 15/804,386         | 11/6/2017   | Systems and Methods for Cooling Vehicle Systems of an Autonomous Vehicle   | 10,730,365    | UATC, LLC              |
| US      | 62/568,839         | 10/6/2017   | Systems and Methods for Cooling Vehicle Systems of an Autonomous Vehicle   |               | UATC, LLC              |
| US      | 15/810,495         | 11/13/2017  | Systems and Methods for a Vehicle Controller Safety Monitor  | 10,710,602    | UATC, LLC              |
| US      | 62/569,054         | 10/6/2017   | Systems and Methods for a Vehicle Controller Safety Monitor  |               | UATC, LLC              |
| US      | 15/810,524         | 11/13/2017  | Systems and Methods for a Vehicle Controller Robust to Time Delays   | 10,800,427    | UATC, LLC              |
| US      | 62/574,247         | 10/19/2017  | Systems and Methods for a Vehicle Controller Robust to Time Delays   |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 15/837,341         | 12/11/2017  | Autonomous Vehicle Simulation Testing Systems and Methods              |               | UATC, LLC              |
| US      | 62/577,979         | 10/27/2017  | Autonomous Vehicle Simulation Testing Systems and Methods              |               | UATC, LLC              |
| US      | 15/886,434         | 2/1/2018    | Systems and Methods For Image-Based Free Space Detection               | 10,657,391    | UATC, LLC              |
| US      | 62/613,845         | 1/5/2018    | Systems and Methods For Image-Based Free Space Detection               |               | UATC, LLC              |
| US      | 14/971,850         | 12/16/2015  | PREDICTIVE SENSOR ARRAY CONFIGURATION SYSTEM FOR AN AUTONOMOUS VEHICLE | 9,840,256     | UATC, LLC              |
| US      | 15/694,493         | 9/1/2017    | PREDICTIVE SENSOR ARRAY CONFIGURATION SYSTEM FOR AN AUTONOMOUS VEHICLE | 10,220,852    | UATC, LLC              |
| US      | 16/206,660         | 11/30/2018  | PREDICTIVE SENSOR ARRAY CONFIGURATION SYSTEM FOR AN AUTONOMOUS VEHICLE | 10,684,361    | UATC, LLC              |
| US      | 14/971,866         | 12/16/2015  | PREDICTIVE SENSOR ARRAY CONFIGURATION SYSTEM FOR AN AUTONOMOUS VEHICLE | 9,841,763     | UATC, LLC              |
| US      | 15/716,144         | 9/26/2017   | PREDICTIVE SENSOR ARRAY CONFIGURATION SYSTEM FOR AN AUTONOMOUS VEHICLE | 10,712,742    | UATC, LLC              |
| US      | 62/628,586         | 2/9/2018    | LIDAR MANUFACTURING AT SCALE   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 15/972,566         | 5/7/2018    | Multiple Stage Image Based Object Detection and Recognition                    | 10,762,396    | UATC, LLC              |
| US      | 17/007,969         | 8/31/2020   | Multiple Stage Image Based Object Detection and Recognition                    | 11,443,148    | UATC, LLC              |
| US      | 17/942,898         | 9/12/2022   | Multiple Stage Image Based Object Detection and Recognition                    |               | UATC, LLC              |
| US      | 17/733,688         | 4/29/2022   | Multiple Stage Image Based Object Detection and Recognition                    |               | UATC, LLC              |
| US      | 62/594,631         | 12/15/2017  | Multiple Stage Image Based Object Detection and Recognition                    |               | UATC, LLC              |
| US      | 15/839,100         | 12/12/2017  | Nozzles and Systems for Cleaning Vehicle Sensors                               | 10,144,394    | UATC, LLC              |
| US      | 16/142,485         | 9/26/2018   | Nozzles and Systems for Cleaning Vehicle Sensors                               | 11,046,288    | UATC, LLC              |
| US      | 17/359,063         | 6/25/2021   | Nozzles and Systems for Cleaning Vehicle Sensors                               |               | UATC, LLC              |
| US      | 62/583,143         | 11/8/2017   | Nozzles and Systems for Cleaning Sensors of an Autonomous Vehicle              |               | UATC, LLC              |
| US      | 10/746,692         | 12/29/2003  | Microwave Vehicle-to-Vehicle Warning System                                    | 7,102,536     | UATC, LLC              |
| US      | 60/438,536         | 1/8/2003    | Microwave alerting system for vehicles   |               | UATC, LLC              |
| US      | 15/728,911         | 10/10/2017  | Cellular Device Location Discovery Systems and Methods for Autonomous Vehicles | 10,545,507    | UATC, LLC              |
| US      | 16/743,233         | 1/15/2020   | Cellular Device Location Discovery Systems and Methods for Autonomous Vehicles | 11,378,980    | UATC, LLC              |
| US      | 62/563,697         | 9/27/2017   | Cellular Device Location Discovery Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 29/623,500         | 10/25/2017  | Sensor Housing for a Vehicle  | D871,310      | UATC, LLC              |
| US      | 15/892,506         | 2/9/2018    | Modular Vehicle Computing System Cooling Systems                                    | 10,481,652    | UATC, LLC              |
| US      | 62/593,454         | 12/1/2017   | Modular Devices and Systems for Cooling a Computing System of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 15/807,893         | 11/9/2017   | Autonomous Vehicle Testing Systems and Methods                                      | 10,599,546    | UATC, LLC              |
| US      | 16/784,408         | 2/7/2020    | Autonomous Vehicle Testing Systems and Methods                                      | 11,216,355    | UATC, LLC              |
| US      | 17/567,231         | 1/3/2022    | Autonomous Vehicle Testing Systems and Methods                                      |               | UATC, LLC              |
| US      | 62/576,844         | 10/25/2017  | Autonomous Vehicle Testing Systems and Methods                                      |               | UATC, LLC              |
| US      | 15/893,729         | 2/12/2018   | Simulated Sensor Testing  |               | UATC, LLC              |
| US      | 62/598,125         | 12/13/2017  | Simulated Sensor Testing  |               | UATC, LLC              |
| US      | 15/983,491         | 5/18/2018   | Systems and Methods for Streaming Processing for Autonomous Vehicles                | 11,760,280    | UATC, LLC              |
| US      | 15/983,499         | 5/18/2018   | Systems and Methods for Streaming Processing for Autonomous Vehicles                |               | UATC, LLC              |
| US      | 15/983,504         | 5/18/2018   | Systems and Methods for Streaming Processing for Autonomous Vehicles                | 11,161,464    | UATC, LLC              |
| US      | 17/515,932         | 11/1/2021   | Systems and Methods for Streaming Processing for Autonomous Vehicles                | 11,713,006    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/616,542         | 1/12/2018   | Systems and Methods For Streaming Autonomy Processing For Autonomous Vehicles                            |               | UATC, LLC              |
| US      | 14/979,248         | 12/22/2015  | THERMAL REDUCTION SYSTEM FOR AN AUTOMATED VEHICLE  | 9,855,816     | UATC, LLC              |
| US      | 15/623,229         | 6/14/2017   | THERMAL REDUCTION SYSTEM FOR AN AUTONOMOUS VEHICLE   |               | UATC, LLC              |
| US      | 15/816,700         | 11/17/2017  | ROTARY DATA COUPLER  | 10,177,820    | UATC, LLC              |
| US      | 16/186,056         | 11/9/2018   | ROTARY DATA COUPLER  | 10,498,403    | UATC, LLC              |
| US      | 16/669,180         | 10/30/2019  | ROTARY DATA COUPLER  | 10,784,928    | UATC, LLC              |
| US      | 17/027,121         | 9/21/2020   | ROTARY DATA COUPLER  | 11,349,527    | UATC, LLC              |
| US      | 09/824,543         | 4/2/2001    | Calibration of orthogonal sensor suite   | 6,729,176     | UATC, LLC              |
| US      | 15/850,398         | 12/21/2017  | Systems and Methods for Providing a Vehicle Service Via a Transportation Network for Autonomous Vehicles | 10,571,917    | UATC, LLC              |
| US      | 16/799,040         | 2/24/2020   | Systems and Methods for Providing a Vehicle Service Via a Transportation Network for Autonomous Vehicles | 11,099,566    | UATC, LLC              |
| US      | 17/409,105         | 8/23/2021   | Systems and Methods for Providing a Vehicle Service Via a Transportation Network for Autonomous Vehicles | 11,797,005    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 18/468,061         | 9/15/2023   | Systems and Methods for Providing a Vehicle Service Via a Transportation Network for Autonomous Vehicles |               | UATC, LLC              |
| US      | 62/584,268         | 11/10/2017  | Systems and Methods for Providing a Vehicle Service via a Transportation Network for Autonomous Vehicles |               | UATC, LLC              |
| US      | 15/933,499         | 3/23/2018   | SYSTEMS AND METHODS FOR REMOTE INSPECTION OF A VEHICLE   | 11,243,547    | UATC, LLC              |
| US      | 17/592,860         | 2/4/2022    | SYSTEMS AND METHODS FOR REMOTE INSPECTION OF A VEHICLE   |               | UATC, LLC              |
| US      | 62/620,656         | 1/23/2018   | Systems and Methods For Remote Inspection of a Vehicle   |               | UATC, LLC              |
| US      | 15/980,324         | 5/15/2018   | Systems and Methods for Controlling an Autonomous Vehicle  | 11,215,984    | UATC, LLC              |
| US      | 17/564,873         | 12/29/2021  | Systems and Methods for Controlling an Autonomous Vehicle  | 11,840,266    | UATC, LLC              |
| US      | 62/615,206         | 1/9/2018    | Systems and Methods for Controlling Autonomous Vehicle   |               | UATC, LLC              |
| US      | 15/882,294         | 1/29/2018   | Vehicle Dynamics Monitor For Autonomous Vehicle  | 10,684,622    | UATC, LLC              |
| US      | 62/589,701         | 11/22/2017  | VEHICLE DYNAMICS MONITOR FOR AUTONOMOUS VEHICLE  |               | UATC, LLC              |
| US      | 11/818,187         | 6/12/2007   | DUAL ASSESSMENT FOR EARLY COLLISION WARNING  | 7,881,868     | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 11/818,122         | 6/12/2007   | USING LONG-RANGE DYNAMICS AND MENTAL-STATE MODELS TO ASSESS COLLISION RISK FOR EARLY WARNING | 7,792,641     | UATC, LLC              |
| US      | 11/818,191         | 6/12/2007   | USING SEGMENTED CONES FOR FAST, CONSERVATIVE ASSESSMENT OF COLLISION RISK                    | 7,831,391     | UATC, LLC              |
| US      | 11/818,177         | 6/12/2007   | TWO-LEVEL GROUPING OF PRINCIPALS FOR A COLLISION WARNING SYSTEM                              | 8,352,173     | UATC, LLC              |
| US      | 14/979,187         | 12/22/2015  | INTEGRATED CLUTCH STEERING SYSTEM  | 9,481,393     | UATC, LLC              |
| US      | 15/239,056         | 8/17/2016   | INTEGRATED CLUTCH STEERING SYSTEM  | 10,099,723    | UATC, LLC              |
| US      | 11/818,176         | 6/12/2007   | HUMAN-MACHINE-INTERFACE (HMI) CUSTOMIZATION BASED ON COLLISION ASSESSMENTS                   | 7,710,248     | UATC, LLC              |
| US      | 13/614,678         | 9/13/2012   | Lamp ignition system and lamp ignition method  | 8,901,840     | UATC, LLC              |
| US      | 15/855,313         | 12/27/2017  | Autonomous Vehicle Sensor Compensation By Monitoring Acceleration                            | 10,871,777    | UATC, LLC              |
| US      | 62/592,527         | 11/30/2017  | Autonomous Vehicle Sensor Compensation By Monitoring Acceleration                            |               | UATC, LLC              |
| US      | 15/855,364         | 12/27/2017  | Autonomous Vehicle Sensor Compensation Using Displacement Sensor                             |               | UATC, LLC              |
| US      | 62/592,529         | 11/30/2017  | Autonomous Vehicle Sensor Compensation Using Displacement Sensor                             |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/839,137         | 12/12/2017  | Vehicle Sensor Cleaning System  | 10,723,325    | UATC, LLC              |
| US      | 62/583,153         | 11/8/2017   | Cleaning Patterns for Autonomous Vehicle Sensor Cleaning System           |               | UATC, LLC              |
| US      | 15/848,564         | 12/20/2017  | Object Interaction Prediction Systems and Methods for Autonomous Vehicles | 10,562,538    | UATC, LLC              |
| US      | 16/792,725         | 2/17/2020   | Object Interaction Prediction Systems and Methods for Autonomous Vehicles | 10,882,535    | UATC, LLC              |
| US      | 17/139,481         | 12/31/2020  | Object Interaction Prediction Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |
| US      | 62/589,951         | 11/22/2017  | Object Interaction Prediction Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |
| US      | 15/907,906         | 2/28/2018   | Location Based Vehicle Headlight Control                                  |               | UATC, LLC              |
| US      | 62/595,906         | 12/7/2017   | Location Based Vehicle Headlight Control                                  |               | UATC, LLC              |
| US      | 15/882,372         | 1/29/2018   | Methods, Devices, and Systems For Communicating Autonomous-Vehicle Status | 11,195,353    | UATC, LLC              |
| US      | 62/618,367         | 1/17/2018   | Methods, Devices, and Systems for Communicating Autonomous-Vehicle Status |               | UATC, LLC              |
| US      | 16/220,336         | 12/14/2018  | ONLINE LIDAR INTENSITY NORMALIZATION                                      | 11,422,260    | UATC, LLC              |
| US      | 17/889,865         | 8/17/2022   | ONLINE LIDAR INTENSITY NORMALIZATION                                      |               | UATC, LLC              |
| US      | 62/614,891         | 1/8/2018    | ONLINE LIDAR INTENSITY NORMALIZATION                                      |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 16/100,690         | 8/10/2018   | LIDAR INTENSITY CALIBRATION   | 11,067,676    | UATC, LLC              |
| US      | 17/359,000         | 6/25/2021   | LIDAR INTENSITY CALIBRATION   | 11,726,191    | UATC, LLC              |
| US      | 62/614,904         | 1/8/2018    | OFFLINE LIDAR INTENSITY CALIBRATION                                       |               | UATC, LLC              |
| US      | 14/979,351         | 12/22/2015  | INTELLIGENT LENS MASKING SYSTEM FOR AN AUTONOMOUS VEHICLE                 | 10,048,696    | UATC, LLC              |
| US      | 16/018,246         | 6/26/2018   | LENS MASKING SYSTEM FOR A VEHICLE   | 10,884,271    | UATC, LLC              |
| US      | 16/123,147         | 9/6/2018    | Semantic and Instance Segmentation  | 10,803,328    | UATC, LLC              |
| US      | 62/586,564         | 11/15/2017  | Semantic and Instance Segmentation  |               | UATC, LLC              |
| US      | 16/133,046         | 9/17/2018   | Three Dimensional Object Detection  |               | UATC, LLC              |
| US      | 62/586,631         | 11/15/2017  | Efficient 3D Object Detection from Point Clouds                           |               | UATC, LLC              |
| US      | 16/122,203         | 9/5/2018    | End-to-End Tracking of Objects  | 11,017,550    | UATC, LLC              |
| US      | 16/124,966         | 9/7/2018    | Systems and Methods for Object Detection, Tracking, and Motion Prediction | 11,475,351    | UATC, LLC              |
| US      | 62/635,881         | 2/27/2018   | Object Detection, Tracking, and Motion Prediction                         |               | UATC, LLC              |
| US      | 17/328,566         | 5/24/2021   | End-to-End Tracking of Objects  |               | UATC, LLC              |
| US      | 62/586,700         | 11/15/2017  | End-to-End Tracking of Objects  |               | UATC, LLC              |
| US      | 15/890,886         | 2/7/2018    | Sparse Convolutional Neural Networks                                      | 11,061,402    | UATC, LLC              |
| US      | 17/363,986         | 6/30/2021   | Sparse Convolutional Neural Networks                                      | 11,860,629    | UATC, LLC              |
| US      | 18/513,119         | 11/17/2023  | Sparse Convolutional Neural Networks                                      |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/586,668         | 11/15/2017  | Sparse Convolutional Neural Networks   |               | UATC, LLC              |
| US      | 16/122,267         | 9/5/2018    | Autonomous Vehicle Lane Boundary Detection Systems and Methods                           | 10,803,325    | UATC, LLC              |
| US      | 62/586,725         | 11/15/2017  | Deep Convolutional Neural Networks for Online Multi-Sensor Lane Detection                |               | UATC, LLC              |
| US      | 16/122,413         | 9/5/2018    | Autonomous Vehicle Lane Boundary Detection Systems and Methods                           | 11,080,537    | UATC, LLC              |
| US      | 17/359,031         | 6/25/2021   | Autonomous Vehicle Lane Boundary Detection Systems and Methods                           | 11,682,196    | UATC, LLC              |
| US      | 18/313,794         | 5/8/2023    | Autonomous Vehicle Lane Boundary Detection Systems and Methods                           |               | UATC, LLC              |
| US      | 62/586,741         | 11/15/2017  | Deep Convolutional Neural Networks for Online Multi-Sensor Lane Detection                |               | UATC, LLC              |
| US      | 16/123,289         | 9/6/2018    | Lightweight Vehicle Localization Systems and Methods                                     | 10,859,384    | UATC, LLC              |
| US      | 62/586,759         | 11/15/2017  | Light-Weight Highway Localization for Autonomous Vehicles                                |               | UATC, LLC              |
| US      | 16/123,343         | 9/6/2018    | Systems and Methods for Generating Sparse Geographic Data for Autonomous Vehicles        |               | UATC, LLC              |
| US      | 62/586,770         | 11/15/2017  | Hierarchical Recurrent Attention Networks for Structured Online Maps                     |               | UATC, LLC              |
| US      | 15/898,960         | 2/19/2018   | Systems and Methods for Implementing Vehicle Assignments using Vehicle State Information |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/618,383         | 1/17/2018   | Systems and Methods for Implementing Vehicle Assignments Using Vehicle State Information |               | UATC, LLC              |
| US      | 14/967,154         | 12/11/2015  | SYSTEM FOR ACQUIRING TIME-SYNCHRONIZED SENSOR DATA                                       | 9,537,956     | UATC, LLC              |
| US      | 14/967,178         | 12/11/2015  | SYSTEM FOR PROCESSING ASYNCHRONOUS SENSOR DATA   | 9,596,666     | UATC, LLC              |
| US      | 14/967,205         | 12/11/2015  | FORMATTING SENSOR DATA FOR USE IN AUTONOMOUS VEHICLE COMMUNICATIONS PLATFORM             | 9,785,150     | UATC, LLC              |
| US      | 15/726,050         | 10/5/2017   | FORMATTING SENSOR DATA FOR USE IN AUTONOMOUS VEHICLE COMMUNICATIONS PLATFORM             | 10,101,747    | UATC, LLC              |
| US      | 16/106,936         | 8/21/2018   | FORMATTING SENSOR DATA FOR USE IN AUTONOMOUS VEHICLE COMMUNICATIONS PLATFORM             | 10,877,483    | UATC, LLC              |
| US      | 15/907,829         | 2/28/2018   | Task Management Platform for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 62/619,147         | 1/19/2018   | Systems and Methods for a Task Management Platform                                       |               | UATC, LLC              |
| US      | 15/875,000         | 1/19/2018   | Systems and Methods for Brake Redundancy for an Autonomous Vehicle                       | 10,875,511    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/595,193         | 12/6/2017   | Systems and Methods for Brake Redundancy for an Autonomous Vehicle                       |               | UATC, LLC              |
| US      | 62/614,545         | 1/8/2018    | Systems and Methods for Brake Redundancy for an Autonomous Vehicle                       |               | UATC, LLC              |
| US      | 16/175,161         | 10/30/2018  | Continuous Convolution and Fusion in Neural Networks                                     | 11,556,777    | UATC, LLC              |
| US      | 18/153,486         | 1/12/2023   | Continuous Convolution and Fusion in Neural Networks                                     | 11,880,771    | UATC, LLC              |
| US      | 62/586,717         | 11/15/2017  | Deep Parametric Continuous Convolutional Neural Networks                                 |               | UATC, LLC              |
| US      | 29/625,190         | 11/7/2017   | Sensor Housing for a Vehicle   | D881,109      | UATC, LLC              |
| US      | 29/730,410         | 4/3/2020    | Sensor Housing for a Vehicle   | D111,248      | UATC, LLC              |
| US      | 15/882,325         | 1/29/2018   | Systems and Methods For Communication Via Hydraulic Fluid                                |               | UATC, LLC              |
| US      | 62/615,740         | 1/10/2018   | Systems and Methods For Communication Via Hydraulic Fluid                                |               | UATC, LLC              |
| US      | 62/575,200         | 10/20/2017  | Dispatching a Third-Party Autonomous Vehicle   |               | UATC, LLC              |
| US      | 15/858,044         | 12/29/2017  | Object Motion Prediction and Vehicle Control Systems and Methods for Autonomous Vehicles | 10,156,850    | UATC, LLC              |
| US      | 16/198,114         | 11/21/2018  | Object Motion Prediction and Vehicle Control Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |
| US      | 62/596,308         | 12/8/2017   | Object Motion Prediction and Vehicle Control Systems and Methods for Autonomous Vehicles |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/924,844         | 3/19/2018   | Methods, Devices, and Systems For Analyzing Motion Plans of Autonomous Vehicles    | 11,687,079    | UATC, LLC              |
| US      | 62/622,233         | 1/26/2018   | Methods, Devices, and Systems For Analyzing Motion Plans of Autonomous Vehicles    |               | UATC, LLC              |
| US      | 15/895,381         | 2/13/2018   | Passenger Experience and Biometric Monitoring in an Autonomous Vehicle             |               | UATC, LLC              |
| US      | 62/620,735         | 1/23/2018   | Passenger Experience and Biometric Monitoring in an Autonomous Vehicle             |               | UATC, LLC              |
| US      | 16/058,364         | 8/8/2018    | Discrete Decision Architecture for Motion Planning System of an Autonomous Vehicle | 11,262,756    | UATC, LLC              |
| US      | 16/058,430         | 8/8/2018    | Discrete Decision Architecture for Motion Planning System of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 17/585,650         | 1/27/2022   | Discrete Decision Architecture for Motion Planning System of an Autonomous Vehicle | 11860630      | UATC, LLC              |
| US      | 18/150,880         | 1/6/2023    | Discrete Decision Architecture for Motion Planning System of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 62/617,417         | 1/15/2018   | Discrete Design Architecture For Motion Planning System of an Autonomous Vehicle   |               | UATC, LLC              |
| US      | 62/681,482         | 6/6/2018    | Gridlock Solver for Motion Planning System of an Autonomous Vehicle                |               | UATC, LLC              |
| US      | 15/070,754         | 3/15/2016   | DRIVE-BY-WIRE CONTROL SYSTEM   | 9,580,080     | UATC, LLC              |
| US      | 15/408,619         | 1/18/2017   | DRIVE-BY-WIRE CONTROL SYSTEM   | 10,585,432    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/070,795         | 3/15/2016   | SYSTEM FOR SWITCHING CONTROL OF AN AUTONOMOUS VEHICLE                         | 9,616,896     | UATC, LLC              |
| US      | 15/883,715         | 1/30/2018   | Telecommunications Network For Vehicles                                       | 11,223,933    | UATC, LLC              |
| US      | 62/616,820         | 1/12/2018   | Telecommunications Network For Autonomous Vehicles                            |               | UATC, LLC              |
| US      | 15/884,852         | 1/31/2018   | Systems and Methods for On-Site Recovery of Autonomous Vehicles               | 10,579,054    | UATC, LLC              |
| US      | 16/786,297         | 2/10/2020   | Systems and Methods for On-Site Recovery of Autonomous Vehicles               | 10,996,668    | UATC, LLC              |
| US      | 62/623,155         | 1/29/2018   | Systems and Methods for On-Site Recovery of Autonomous Vehicles               |               | UATC, LLC              |
| US      | 15/918,043         | 3/12/2018   | REMOTE ASSIST FEEDBACK SYSTEM FOR AUTONOMOUS VEHICLES                         | 10,501,014    | UATC, LLC              |
| US      | 62/637,563         | 3/2/2018    | REMOTE ASSIST FEEDBACK SYSTEM FOR AUTONOMOUS VEHICLES                         |               | UATC, LLC              |
| US      | 16/123,233         | 9/6/2018    | Semantic Segmentation of Three-Dimensional Data                               | 10,970,553    | UATC, LLC              |
| US      | 17/208,509         | 3/22/2021   | Semantic Segmentation of Three-Dimensional Data                               | 11,657,603    | UATC, LLC              |
| US      | 18/299,970         | 4/13/2023   | Semantic Segmentation of Three-Dimensional Data                               |               | UATC, LLC              |
| US      | 62/586,777         | 11/15/2017  | Efficient Convolutions for Real-Time Semantic Segmentation of 3D Point Clouds |               | UATC, LLC              |
| US      | 15/995,285         | 6/1/2018    | Autonomous Vehicle Safe Stop  | 10,962,973    | UATC, LLC              |
| US      | 17/181,733         | 2/22/2021   | Autonomous Vehicle Safe Stop  | 11,835,950    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 18/490,940         | 10/20/2023  | Autonomous Vehicle Safe Stop   |               | UATC, LLC              |
| US      | 62/623,815         | 1/30/2018   | Autonomous Vehicle Safe Stop   |               | UATC, LLC              |
| US      | 15/865,790         | 1/9/2018    | Autonomous Vehicle Motion Control Systems and Methods  | 10,933,869    | UATC, LLC              |
| US      | 17/159,948         | 1/27/2021   | Autonomous Vehicle Motion Control Systems and Methods  | 11,667,283    | UATC, LLC              |
| US      | 18/308,160         | 4/27/2023   | Autonomous Vehicle Motion Control Systems and Methods  |               | UATC, LLC              |
| US      | 62/592,024         | 11/29/2017  | Autonomous Vehicle Motion Control Systems and Methods  |               | UATC, LLC              |
| US      | 15/901,424         | 2/21/2018   | Autonomous Vehicle Interface System With Multiple Interface Devices Featuring Redundant Vehicle Commands | 11,285,965    | UATC, LLC              |
| US      | 17/686,852         | 3/4/2022    | Autonomous Vehicle Interface System With Multiple Interface Devices Featuring Redundant Vehicle Commands |               | UATC, LLC              |
| US      | 62/629,142         | 2/12/2018   | Autonomous Vehicle Interface System With Multiple Interface Devices Featuring Redundant Vehicle Commands |               | UATC, LLC              |
| US      | 15/978,732         | 5/14/2018   | Systems and Methods for a Scenario Tagger for Autonomous Vehicles  | 11,086,318    | UATC, LLC              |
| US      | 17/376,947         | 7/15/2021   | Systems and Methods for a Scenario Tagger for Autonomous Vehicles  | 11,693,409    | UATC, LLC              |
| US      | 62/645,978         | 3/21/2018   | Systems And Methods For A Scenario Tagger For Autonomous Vehicles  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/018,523         | 6/26/2018   | Systems and Methods for Coordinating Movement of Assets within a Transfer Hub       | 11,551,554    | UATC, LLC              |
| US      | 62/662,996         | 4/26/2018   | Systems and Methods for Coordinating a Movement of Assets within a Transfer Hub     |               | UATC, LLC              |
| US      | 61/907,951         | 11/22/2013  | LIDAR SCANNER CALIBRATION   |               | UATC, LLC              |
| US      | 15/036,768         | 11/21/2014  | LIDAR SCANNER CALIBRATION   | 9,772,399     | UATC, LLC              |
| US      | 15/627,700         | 6/20/2017   | LIDAR SCANNER CALIBRATION   | 9,971,024     | UATC, LLC              |
| US      | 15/379,854         | 12/15/2016  | DYNAMIC LIDAR SENSOR CONTROLLER   | 10,338,225    | UATC, LLC              |
| US      | 16/035,862         | 7/16/2018   | ADJUSTABLE BEAM PATTERN FOR LIDAR SENSOR  | 10,677,925    | UATC, LLC              |
| US      | 16/859,650         | 4/27/2020   | ADJUSTABLE BEAM PATTERN FOR LIDAR SENSOR  | 11,740,355    | UATC, LLC              |
| US      | 18/351,075         | 7/12/2023   | ADJUSTABLE BEAM PATTERN FOR LIDAR SENSOR  |               | UATC, LLC              |
| US      | 62/267,785         | 12/15/2015  | DYNAMIC LIDAR SENSOR CONTROLLER   |               | UATC, LLC              |
| US      | 16/018,536         | 6/26/2018   | Systems and Methods for Coordinating an Arrival of One or More Assets at a Location |               | UATC, LLC              |
| US      | 62/663,007         | 4/26/2018   | Systems and Methods for Coordinating an Arrival of One or More Assets at a Location |               | UATC, LLC              |
| US      | 16/018,563         | 6/26/2018   | Systems and Methods for Managing Space at a Location for Receiving Assets           | 10,672,277    | UATC, LLC              |
| US      | 16/889,182         | 6/1/2020    | Systems and Methods for Managing Space at a Location for Receiving Assets           | 11,217,102    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 17/539,416         | 12/1/2021   | Systems and Methods for Managing Space at a Location for Receiving Assets                                       |               | UATC, LLC              |
| US      | 62/663,009         | 4/26/2018   | Systems and Methods for Managing Space at a Location for Receiving Assets                                       |               | UATC, LLC              |
| US      | 15/991,506         | 5/29/2018   | Detecting Light Collisions of Autonomous Vehicles   |               | UATC, LLC              |
| US      | 16/220,407         | 12/14/2018  | Detecting Damages Associated with Autonomous Vehicles   |               | UATC, LLC              |
| US      | 62/665,856         | 5/2/2018    | Detecting Soft-Body Collisions of Autonomous Vehicles   |               | UATC, LLC              |
| US      | 15/980,264         | 5/15/2018   | Motion-Plan Validator for Autonomous Vehicle  | 11,243,541    | UATC, LLC              |
| US      | 17/574,201         | 1/12/2022   | Motion-Plan Validator for Autonomous Vehicle  | 11899462      | UATC, LLC              |
| US      | 62/646,964         | 3/23/2018   | Motion-Plan Validator for Autonomous Vehicle  |               | UATC, LLC              |
| US      | 16/020,193         | 6/27/2018   | Object Detection and Determination of Motion Information Using Curve-Fitting in Autonomous Vehicle Applications |               | UATC, LLC              |
| US      | 62/655,432         | 4/10/2018   | Object Detection and Determination of Motion Information Using Curve-Fitting in Autonomous Vehicle Applications |               | UATC, LLC              |
| US      | 16/038,789         | 7/18/2018   | Traffic Signal State Classification for Autonomous Vehicles   | 11,334,753    | UATC, LLC              |
| US      | 62/664,672         | 4/30/2018   | Traffic Signal State Classification for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 16/038,730         | 7/18/2018   | Object Association for Autonomous Vehicles  | 11,138,745    | UATC, LLC              |
| US      | 17/494,165         | 10/5/2021   | Object Association for Autonomous Vehicles  | 11,651,240    | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 18/297,937         | 4/10/2023   | Object Association for Autonomous Vehicles                                     |               | UATC, LLC              |
| US      | 62/664,678         | 4/30/2018   | Object Association for Autonomous Vehicles                                     |               | UATC, LLC              |
| US      | 16/038,740         | 7/18/2018   | Object Detection and Property Determination for Autonomous Vehicles            | 11,164,016    | UATC, LLC              |
| US      | 17/516,159         | 11/1/2021   | Object Detection and Property Determination for Autonomous Vehicles            | 11,836,623    | UATC, LLC              |
| US      | 18/497,025         | 10/30/2023  | Object Detection and Property Determination for Autonomous Vehicles            |               | UATC, LLC              |
| US      | 62/672,745         | 5/17/2018   | Object Detection and Property Determination for Autonomous Vehicles            |               | UATC, LLC              |
| US      | 62/630,159         | 2/13/2018   | Learning to Reweight Examples for Machine-Learned Models                       |               | UATC, LLC              |
| US      | 16/009,572         | 6/15/2018   | Initial Trajectory Generator for Motion Planning System of Autonomous Vehicles | 11,169,528    | UATC, LLC              |
| US      | 17/498,378         | 10/11/2021  | Initial Trajectory Generator for Motion Planning System of Autonomous Vehicles | 11,714,417    | UATC, LLC              |
| US      | 62/670,330         | 5/11/2018   | Initial Trajectory Generator for Motion Planning System of Autonomous Vehicles |               | UATC, LLC              |
| US      | 15/376,270         | 12/12/2016  | VEHICLE CONTROL SYSTEM USING TIRE SENSOR DATA                                  |               | UATC, LLC              |
| US      | 15/376,574         | 12/12/2016  | VEHICLE TRACTION MAP FOR AUTONOMOUS VEHICLES                                   | 10,712,160    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 15/376,583         | 12/12/2016  | MOTION PLANNING FOR A VEHICLE USING TRACTION INFORMATION                         |               | UATC, LLC              |
| US      | 15/376,587         | 12/12/2016  | PLANNING TRIPS ON A ROAD NETWORK USING TRACTION INFORMATION FOR THE ROAD NETWORK | 10,119,827    | UATC, LLC              |
| US      | 15/376,592         | 12/12/2016  | ACTIVE LIGHT SENSORS FOR DETERMINING EXPECTED TRACTION VALUE OF A ROAD SEGMENT   |               | UATC, LLC              |
| US      | 15/376,596         | 12/12/2016  | SYSTEM AND METHOD TO DETERMINE TRACTION OF DISCRETE LOCATIONS OF A ROAD SEGMENT  | 10,018,472    | UATC, LLC              |
| US      | 15/376,604         | 12/12/2016  | SYSTEM AND METHOD TO DETERMINE TRACTION ABILITY OF VEHICLES IN OPERATION         |               | UATC, LLC              |
| US      | 17/519,178         | 11/4/2021   | SYSTEM AND METHOD TO DETERMINE TRACTION ABILITY OF VEHICLES IN OPERATION         |               | UATC, LLC              |
| US      | 62/265,960         | 12/10/2015  | VEHICLE CONTROL SYSTEM USING TIRE SENSOR DATA                                    |               | UATC, LLC              |
| US      | 16/220,406         | 12/14/2018  | Systems and Methods for Remote Status Detection of Autonomous Vehicles           | 11,614,735    | UATC, LLC              |
| US      | 18/175,748         | 2/28/2023   | Systems and Methods for Remote Status Detection of Autonomous Vehicles           |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/673,227         | 5/18/2018   | Systems and Methods for Remote Status Detection of Autonomous Vehicles             |               | UATC, LLC              |
| US      | 16/353,457         | 3/14/2019   | Three-Dimensional Object Detection   | 11,500,099    | UATC, LLC              |
| US      | 16/353,463         | 3/14/2019   | Three-Dimensional Object Detection   | 11,221,413    | UATC, LLC              |
| US      | 17/571,845         | 1/10/2022   | Three-Dimensional Object Detection   | 11,768,292    | UATC, LLC              |
| US      | 17/971,069         | 10/21/2022  | Three-Dimensional Object Detection   |               | UATC, LLC              |
| US      | 62/643,072         | 3/14/2018   | Exploiting Continuous Convolutions for 3D Object Detection with Multisensor Fusion |               | UATC, LLC              |
| US      | 62/753,434         | 10/31/2018  | Three-Dimensional Object Detection   |               | UATC, LLC              |
| US      | 16/165,550         | 10/19/2018  | Systems and Methods for Implementing Trip Checks for Vehicles                      |               | UATC, LLC              |
| US      | 62/678,312         | 5/31/2018   | Systems and Methods for Automating Trip Checks for Vehicles                        |               | UATC, LLC              |
| US      | 16/037,610         | 7/17/2018   | Automated Cleaning Systems for Autonomous Vehicles                                 | 11,235,471    | UATC, LLC              |
| US      | 17/574,897         | 1/13/2022   | Automated Cleaning Systems for Autonomous Vehicles                                 |               | UATC, LLC              |
| US      | 62/674,670         | 5/22/2018   | Systems and Methods for Providing Automated Cleaning Systems                       |               | UATC, LLC              |
| US      | 16/037,719         | 7/17/2018   | Automated Delivery Systems for Autonomous Vehicles                                 | 11,447,055    | UATC, LLC              |
| US      | 17/940,447         | 9/8/2022    | Automated Delivery Systems for Autonomous Vehicles                                 |               | UATC, LLC              |
| US      | 62/674,674         | 5/22/2018   | Systems and Methods for Providing Automated Delivery Systems                       |               | UATC, LLC              |
| US      | 16/013,361         | 6/22/2018   | Movable Front Shield for Vehicles  | 11,338,866    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 17/724,902         | 4/20/2022   | Movable Front Shield for Vehicles   |               | UATC, LLC              |
| US      | 62/678,320         | 5/31/2018   | Movable Front Shield for Vehicles   |               | UATC, LLC              |
| US      | 16/010,720         | 6/18/2018   | INTERIOR ARRANGEMENTS FOR AUTONOMOUS VEHICLES   |               | UATC, LLC              |
| US      | 62/674,753         | 5/22/2018   | Interior Arrangements for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 16/010,757         | 6/18/2018   | Apparatus for Positioning an Interactive-Display Device within an Interior of an Autonomous Vehicle | 10,613,815    | UATC, LLC              |
| US      | 62/674,761         | 5/22/2018   | Apparatus for Positioning an Interactive-Display Device within an Interior of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 16/045,081         | 7/25/2018   | Platform Configurations for Autonomous Vehicles   | 10,569,663    | UATC, LLC              |
| US      | 62/693,644         | 7/3/2018    | Platform Configurations for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 16/114,966         | 8/28/2018   | DETERMINING SPECULAR REFLECTIVITY CHARACTERISTICS USING LIDAR                                       | 11,333,740    | UATC, LLC              |
| US      | 17/725,867         | 4/21/2022   | DETERMINING SPECULAR REFLECTIVITY CHARACTERISTICS USING LIDAR                                       |               | UATC, LLC              |
| US      | 62/680,338         | 6/4/2018    | DETERMINING SPECULAR REFLECTIVITY CHARACTERISTICS USING LIDAR                                       |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 15/446,953         | 3/1/2017    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM            | 10,281,923    | UATC, LLC              |
| US      | 16/242,657         | 1/8/2019    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM            | 10,942,524    | UATC, LLC              |
| US      | 17/171,660         | 2/9/2021    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM            | 11,604,475    | UATC, LLC              |
| US      | 18/170,841         | 2/17/2023   | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM            |               | UATC, LLC              |
| US      | 62/303,013         | 3/3/2016    | PLANAR-BEAM, LIGHT DETECTION AND RANGING SYSTEM            |               | UATC, LLC              |
| US      | 16/043,759         | 7/24/2018   | Providing Actionable Uncertainties in Autonomous Vehicles  | 11,454,975    | UATC, LLC              |
| US      | 17/952,685         | 9/26/2022   | Providing Actionable Uncertainties in Autonomous Vehicles  | 11,860,636    | UATC, LLC              |
| US      | 62/691,124         | 6/28/2018   | Providing Actionable Uncertainties in Autonomous Vehicles  |               | UATC, LLC              |
| US      | 16/154,253         | 10/8/2018   | Vehicle Operator Awareness System                          | 10,647,333    | UATC, LLC              |
| US      | 16/154,264         | 10/8/2018   | Vehicle Operator Awareness System                          | 10,864,920    | UATC, LLC              |
| US      | 17/121,199         | 12/14/2020  | Vehicle Operator Awareness System                          |               | UATC, LLC              |
| US      | 62/725,526         | 8/31/2018   | Vehicle Operator Awareness System                          |               | UATC, LLC              |
| US      | 16/057,167         | 8/7/2018    | Generation of Polar Occlusion Maps for Autonomous Vehicles | 11,326,888    | UATC, LLC              |
| US      | 62/703,167         | 7/25/2018   | Generation of Polar Occlusion Maps for Autonomous Vehicles |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 16/104,253         | 8/17/2018   | Systems and Methods for Autonomous Vehicle Operator Vigilance Management   | 10,611,384    | UATC, LLC              |
| US      | 62/711,044         | 7/27/2018   | Systems and Methods for Autonomous Vehicle Operator Vigilance Management   |               | UATC, LLC              |
| US      | 62/673,471         | 5/18/2018   | Efficient Second-Order Multi-layer Pruning                                 |               | UATC, LLC              |
| US      | 16/103,164         | 8/14/2018   | Palette System for Cargo Transport   | 11,292,678    | UATC, LLC              |
| US      | 17/712,602         | 4/4/2022    | Pallet System for Cargo Transport  |               | UATC, LLC              |
| US      | 18/404,580         | 1/4/2024    | Pallet System for Cargo Transport  |               | UATC, LLC              |
| US      | 62/712,281         | 7/31/2018   | Palette System for Cargo Transport   |               | UATC, LLC              |
| US      | 16/131,529         | 9/14/2018   | Systems and Methods for Pipelined Processing of Sensor Data Using Hardware | 11,334,960    | UATC, LLC              |
| US      | 62/682,550         | 6/8/2018    | Systems and Methods for Pipelined Processing Of Sensor Data Using Hardware |               | UATC, LLC              |
| US      | 16/520,799         | 7/24/2019   | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSS-TALK                           | 11,609,314    | UATC, LLC              |
| US      | 18/179,019         | 3/6/2023    | LIDAR SYSTEM DESIGN TO MITIGATE LIDAR CROSS-TALK                           |               | UATC, LLC              |
| US      | 62/714,042         | 8/2/2018    | LIDAR DESIGN TO MITIGATE CROSS-TALK  |               | UATC, LLC              |
| US      | 16/122,520         | 9/5/2018    | Motion Planning System of an Autonomous Vehicle                            | 11,237,564    | UATC, LLC              |
| US      | 62/721,739         | 8/23/2018   | Motion Planning System of an Autonomous Vehicle                            |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/685,871         | 6/15/2018   | EXPLOITING HD MAPS FOR 3D OBJECT DETECTION   |               | UATC, LLC              |
| US      | 15/069,428         | 3/14/2016   | SIDEPOD STEREO CAMERA SYSTEM FOR AN AUTONOMOUS VEHICLE                                     | 10,077,007    | UATC, LLC              |
| US      | 16/420,686         | 5/23/2019   | Multi-Task Machine-Learned Models for Object Intention Determination in Autonomous Driving | 11,370,423    | UATC, LLC              |
| US      | 17/749,841         | 5/20/2022   | Multi-Task Machine-Learned Models for Object Intention Determination in Autonomous Driving | 11,794,785    | UATC, LLC              |
| US      | 18/465,128         | 9/11/2023   | Multi-Task Machine-Learned Models for Object Intention Determination in Autonomous Driving |               | UATC, LLC              |
| US      | 62/685,708         | 6/15/2018   | Learning to Predict Intention from Raw Sensor Data   |               | UATC, LLC              |
| US      | 62/748,057         | 10/19/2018  | Multi-Task Machine-Learned Models For Object Intention Determination in Autonomous Driving |               | UATC, LLC              |
| US      | 16/286,160         | 2/26/2019   | System and Method for Determining Object Intention Through Visual Attributes               | 11,341,356    | UATC, LLC              |
| US      | 17/731,722         | 4/28/2022   | System and Method for Determining Object Intention Through Visual Attributes               |               | UATC, LLC              |
| US      | 18/430,912         | 2/2/2024    | System and Method for Determining Object Intention Through Visual Attributes               |               | UATC, LLC              |
| US      | 62/685,714         | 6/15/2018   | Predicting Intent of Drivers Through Visual Attributes                                     |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 62/754,942         | 11/2/2018   | System and Method for Determining Object Intention through Visual Attributes                      |               | UATC, LLC              |
| US      | 16/199,832         | 11/26/2018  | Systems and Methods for Tamper Evident Electronic Detection                                       | 11,377,072    | UATC, LLC              |
| US      | 62/754,950         | 11/2/2018   | Systems and Methods for Tamper Evident Electronic Detection                                       |               | UATC, LLC              |
| US      | 16/520,812         | 7/24/2019   | DETECTING AND TRACKING LIDAR CROSS-TALK   | 11,796,653    | UATC, LLC              |
| US      | 62/714,043         | 8/2/2018    | DETECTING AND TRACKING LIDAR CROSS-TALK   |               | UATC, LLC              |
| US      | 16/129,277         | 9/12/2018   | AUTOMATIC ROBOTICALLY STEERED CAMERA FOR TARGETED HIGH PERFORMANCE PERCEPTION AND VEHICLE CONTROL | 11,592,832    | UATC, LLC              |
| US      | 18/159,961         | 1/26/2023   | Automatic Robotically Steered Sensor for Targeted High Performance Perception and Vehicle Control |               | UATC, LLC              |
| US      | 62/719,984         | 8/20/2018   | AUTOMATIC ROBOTICALLY STEERED CAMERA FOR TARGETED HIGH PERFORMANCE PERCEPTION AND VEHICLE CONTROL |               | UATC, LLC              |
| US      | 16/199,843         | 11/26/2018  | Systems and Methods for Generating Artificial Scenarios for an Autonomous Vehicle                 |               | UATC, LLC              |
| US      | 62/751,061         | 10/26/2018  | Systems and Methods for Generating Artificial Scenarios for an Autonomous Vehicle                 |               | UATC, LLC              |
| US      | 62/716,047         | 8/8/2018    | Vehicle Hardware, Systems, and Methods  |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 62/716,048         | 8/8/2018    | Vehicle Hardware, Systems, and Methods                              |               | UATC, LLC              |
| US      | 62/716,055         | 8/8/2018    | Vehicle Hardware, Systems, and Methods                              |               | UATC, LLC              |
| US      | 62/716,057         | 8/8/2018    | Vehicle Hardware, Systems, and Methods                              |               | UATC, LLC              |
| US      | 15/148,970         | 5/6/2016    | OBJECT DETECTION FOR AN AUTONOMOUS VEHICLE                          | 9,672,446     | UATC, LLC              |
| US      | 15/449,501         | 3/3/2017    | OBJECT DETECTION FOR AN AUTONOMOUS VEHICLE                          | 10,489,686    | UATC, LLC              |
| US      | 62/716,060         | 8/8/2018    | Vehicle Hardware, Systems, and Methods                              |               | UATC, LLC              |
| US      | 62/716,063         | 8/8/2018    | Vehicle Hardware, Systems, and Methods                              |               | UATC, LLC              |
| US      | 16/127,786         | 9/11/2018   | Gridlock Solver for Motion Planning System of an Autonomous Vehicle | 10,691,130    | UATC, LLC              |
| US      | 16/892,853         | 6/4/2020    | Gridlock Solver for Motion Planning System of an Autonomous Vehicle | 11,467,586    | UATC, LLC              |
| US      | 17/962,792         | 10/10/2022  | Gridlock Solver for Motion Planning System of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 16/174,941         | 10/30/2018  | Automatically Adjustable Partition Wall for an Autonomous Vehicle   | 11,235,712    | UATC, LLC              |
| US      | 17/577,881         | 1/18/2022   | Automatically Adjustable Partition Wall for an Autonomous Vehicle   | 11,794,671    | UATC, LLC              |
| US      | 18/467,239         | 9/14/2023   | Automatically Adjustable Partition Wall for an Autonomous Vehicle   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/174,952         | 10/30/2018  | Location-Based Checklist Interface for Autonomous Vehicle Users   | 11,440,490    | UATC, LLC              |
| US      | 16/174,960         | 10/30/2018  | Distinct User and Item Delivery for Autonomous Vehicles           | 11,377,045    | UATC, LLC              |
| US      | 17/856,280         | 7/1/2022    | Distinct User and Item Delivery for Autonomous Vehicles           |               | UATC, LLC              |
| US      | 16/171,827         | 10/26/2018  | Automated Vehicle Seats   | 11,376,992    | UATC, LLC              |
| US      | 17/843,229         | 6/17/2022   | Automated Vehicle Seats   | 11,642,985    | UATC, LLC              |
| US      | 18/192,348         | 3/29/2023   | Automated Vehicle Seats   |               | UATC, LLC              |
| US      | 62/748,846         | 10/22/2018  | Automated Vehicle Seats   |               | UATC, LLC              |
| US      | 16/171,848         | 10/26/2018  | Transportation Receptacle for Vehicles                            | 11,608,002    | UATC, LLC              |
| US      | 62/748,869         | 10/22/2018  | Transportation Receptacle for Vehicles                            |               | UATC, LLC              |
| US      | 16/171,864         | 10/26/2018  | Vehicle Wheel Units   | 11,358,521    | UATC, LLC              |
| US      | 62/748,874         | 10/22/2018  | Vehicle Wheel Units   |               | UATC, LLC              |
| US      | 16/174,636         | 10/30/2018  | Modular Autonomous-Vehicle Interior                               | 11,440,440    | UATC, LLC              |
| US      | 62/748,743         | 10/22/2018  | Modular Autonomous-Vehicle Interior                               |               | UATC, LLC              |
| US      | 15/464,787         | 3/21/2017   | SYSTEM AND METHOD OF SENSOR TRIGGERING FOR SYNCHRONIZED OPERATION | 10,114,103    | UATC, LLC              |
| US      | 16/027,706         | 7/5/2018    | SYSTEM AND METHOD OF SENSOR TRIGGERING FOR SYNCHRONIZED OPERATION | 10,746,841    | UATC, LLC              |
| US      | 62/311,267         | 3/21/2016   | SYSTEM AND METHOD OF SENSOR TRIGGERING FOR SYNCHRONIZED OPERATION |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/173,415         | 10/29/2018  | Systems and Methods for Providing a Ridesharing Vehicle Service using an Autonomous Vehicle | 11,281,216    | UATC, LLC              |
| US      | 17/668,510         | 2/10/2022   | Systems and Methods for Providing a Ridesharing Vehicle Service using an Autonomous Vehicle | 11,835,952    | UATC, LLC              |
| US      | 16/173,392         | 10/29/2018  | Autonomous Vehicle Compatible Robot   | 11,340,625    | UATC, LLC              |
| US      | 17/718,810         | 4/12/2022   | Autonomous Vehicle Compatible Robot   | 11,841,709    | UATC, LLC              |
| US      | 18/495,480         | 10/26/2023  | Autonomous Vehicle Compatible Robot   |               | UATC, LLC              |
| US      | 16/173,431         | 10/29/2018  | Systems and Methods for Autonomous Robot Delivery and Retrieval                             |               | UATC, LLC              |
| US      | 62/749,171         | 10/23/2018  | Systems and Methods for Autonomous Robot Delivery and Retrieval                             |               | UATC, LLC              |
| US      | 62/731,523         | 9/14/2018   | DCFlowNet: Semi-Supervised 2D Optical Flow Estimation via Depth Consistency Through Time    |               | UATC, LLC              |
| US      | 62/747,941         | 10/19/2018  | Systems and Methods for Providing a Ridesharing Vehicle Service Using an Autonomous Vehicle |               | UATC, LLC              |
| US      | 62/737,500         | 9/27/2018   | Neural Architecture Search With Graph Hypernetworks   |               | UATC, LLC              |
| US      | 16/288,255         | 2/28/2019   | Systems and Methods for Identifying Perception Sensor Degradation                           |               | UATC, LLC              |
| US      | 62/786,710         | 12/31/2018  | Systems and Methods for Identifying Perception Sensor Degradation                           |               | UATC, LLC              |
| US      | 16/299,527         | 3/12/2019   | Systems and Methods for Detecting an Object Velocity  | 10,943,355    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 17/181,688         | 2/22/2021   | System and Method for Movement Detection   | 11,593,950    | UATC, LLC              |
| US      | 62/799,314         | 1/31/2019   | Systems and Methods for Detecting an Object Velocity   |               | UATC, LLC              |
| US      | 62/768,816         | 11/16/2018  | Learning to Localize through Compressed Binary Maps  |               | UATC, LLC              |
| US      | 62/846,248         | 5/10/2019   | Feature Compression and Localization for Autonomous Devices  |               | UATC, LLC              |
| US      | 16/598,561         | 10/10/2019  | Feature Compression and Localization for Autonomous Devices  | 11,715,012    | UATC, LLC              |
| US      | 16/598,579         | 10/10/2019  | Binary Feature Compression for Autonomous Devices  | 11,461,583    | UATC, LLC              |
| US      | 16/598,629         | 10/10/2019  | Attention Based Feature Compression and Localization for Autonomous Devices                        | 11,449,713    | UATC, LLC              |
| US      | 16/567,607         | 9/11/2019   | Systems and Methods for Generating Synthetic Light Detection and Ranging Data via Machine Learning | 11,461,963    | UATC, LLC              |
| US      | 17/958,797         | 10/3/2022   | Systems and Methods for Generating Synthetic Light Detection and Ranging Data via Machine Learning | 11,734,885    | UATC, LLC              |
| US      | 18/345,431         | 6/30/2023   | Systems and Methods for Generating Synthetic Light Detection and Ranging Data via Machine Learning |               | UATC, LLC              |
| US      | 62/768,850         | 11/16/2018  | LidarSIM: Combining Physics and Deep Learning for LiDAR Simulation                                 |               | UATC, LLC              |
| US      | 62/834,596         | 4/16/2019   | Systems and Methods for Generating Synthetic Light Detection and Ranging Data Via Machine Learning |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 62/768,845         | 11/16/2018  | Exploiting Sparse Semantic HD Maps for Affordable Localization                              |               | UATC, LLC              |
| US      | 15/050,237         | 2/22/2016   | INTENTION SIGNALING FOR AN AUTONOMOUS VEHICLE   | 9,969,326     | UATC, LLC              |
| US      | 15/143,198         | 4/29/2016   | LIGHTING DEVICE FOR A VEHICLE   | 9,902,311     | UATC, LLC              |
| US      | 15/803,184         | 11/3/2017   | LIGHT OUTPUT SYSTEM FOR A SELF-DRIVING VEHICLE  | 10,160,378    | UATC, LLC              |
| US      | 16/573,592         | 9/17/2019   | Image Based Localization System   | 11,354,820    | UATC, LLC              |
| US      | 17/833,414         | 6/6/2022    | Image Based Localization System   |               | UATC, LLC              |
| US      | 62/768,898         | 11/17/2018  | Retrieve-Regress-Refine: City-scale Image Localization for Autonomous Driving               |               | UATC, LLC              |
| US      | 62/829,672         | 4/5/2019    | Image Based Localization System   |               | UATC, LLC              |
| US      | 62/768,849         | 11/16/2018  | Learning to Match with Deep Structured Attention  |               | UATC, LLC              |
| US      | 16/531,720         | 8/5/2019    | Deep Structured Scene Flow for Autonomous Devices   | 11,468,575    | UATC, LLC              |
| US      | 17/962,624         | 10/10/2022  | Deep Structured Scene Flow for Autonomous Devices   |               | UATC, LLC              |
| US      | 62/768,774         | 11/16/2018  | Deep Structured Scene Flow  |               | UATC, LLC              |
| US      | 62/851,753         | 5/23/2019   | Deep Structured Scene Flow for Autonomous Devices   |               | UATC, LLC              |
| US      | 16/684,689         | 11/15/2019  | System and Method for Identifying Travel Way Features for Autonomous Vehicle Motion Control | 11,217,012    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 17/547,340         | 12/10/2021  | System and Method for Identifying Travel Way Features for Autonomous Vehicle Motion Control |               | UATC, LLC              |
| US      | 62/768,829         | 11/16/2018  | Non-Parametric Memory for Spatio-Temporal Segmentation                                      |               | UATC, LLC              |
| US      | 62/869,251         | 7/1/2019    | System And Method For Identifying Travel Way Features for Autonomous Vehicle Motion Control |               | UATC, LLC              |
| US      | 62/768,767         | 11/16/2018  | UPSNet: A Unified Panoptic Segmentation Network   |               | UATC, LLC              |
| US      | 16/654,487         | 10/16/2019  | Multi-Task Multi-Sensor Fusion for Three-Dimensional Object Detection                       | 11,494,937    | UATC, LLC              |
| US      | 17/972,249         | 10/24/2022  | Multi-Task Multi-Sensor Fusion for Three-Dimensional Object Detection                       |               | UATC, LLC              |
| US      | 62/768,790         | 11/16/2018  | Multi-Task Multi-Sensor Fusion for 3D Object Detection                                      |               | UATC, LLC              |
| US      | 62/858,489         | 6/7/2019    | Multi-Task Multi-Sensor Fusion for Three-Dimensional Object Detection                       |               | UATC, LLC              |
| US      | 62/768,841         | 11/16/2018  | Geometry Preserving 3D Object Detection   |               | UATC, LLC              |
| US      | 16/541,739         | 8/15/2019   | End-To-End Interpretable Motion Planner for Autonomous Vehicles                             | 11,755,018    | UATC, LLC              |
| US      | 18/358,443         | 7/25/2023   | End-To-End Interpretable Motion Planner for Autonomous Vehicles                             |               | UATC, LLC              |
| US      | 62/768,847         | 11/16/2018  | End-to-end Interpretable Neural Motion Planner  |               | UATC, LLC              |
| US      | 62/768,796         | 11/16/2018  | Convolutional Recurrent Network for Road Boundary Extraction                                |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 16/506,522         | 7/9/2019    | Motion Prediction for Autonomous Devices                                     | 11,635,764    | UATC, LLC              |
| US      | 62/809,470         | 2/22/2019   | Motion Prediction for Autonomous Devices                                     |               | UATC, LLC              |
| US      | 15/065,681         | 3/9/2016    | TRAFFIC SIGNAL ANALYSIS SYSTEM   | 9,990,548     | UATC, LLC              |
| US      | 15/926,211         | 3/20/2018   | TRAFFIC SIGNAL ANALYSIS SYSTEM   | 10,726,280    | UATC, LLC              |
| US      | 16/894,118         | 6/5/2020    | TRAFFIC SIGNAL ANALYSIS SYSTEM   | 11,462,022    | UATC, LLC              |
| US      | 16/713,441         | 12/13/2019  | Systems and Methods for Vehicle Motion Planning Based on Uncertainty         | 11,537,127    | UATC, LLC              |
| US      | 62/899,226         | 9/12/2019   | Systems and Methods for Vehicle Motion Planning Based on Uncertainty         |               | UATC, LLC              |
| US      | 16/777,108         | 1/30/2020   | Probabilistic Prediction of Dynamic Object Behavior for Autonomous Vehicles  | 11,521,396    | UATC, LLC              |
| US      | 62/800,435         | 2/2/2019    | Discrete Residual Flow for Probabilistic Pedestrian Behavior Prediction      |               | UATC, LLC              |
| US      | 62/949,101         | 12/17/2019  | Probabilistic Prediction of Dynamic Object Behavior for Autonomous Vehicles  |               | UATC, LLC              |
| US      | 62/802,200         | 2/6/2019    | Autonomous Vehicle Systems and Methods                                       |               | UATC, LLC              |
| US      | 16/825,049         | 3/20/2020   | Jointly Learnable Behavior and Trajectory Planning for Autonomous Vehicles   | 11,755,014    | UATC, LLC              |
| US      | 18/355,188         | 7/19/2023   | Jointly Learnable Behavior and Trajectory Planning for Autonomous Vehicles   |               | UATC, LLC              |
| US      | 62/812,963         | 3/1/2019    | Jointly Learnable Behavior and Trajectory Planning for Self-Driving Vehicles |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 62/955,708         | 12/31/2019  | Jointly Learnable Behavior and Trajectory Planning for Autonomous Vehicles        |               | UATC, LLC              |
| US      | 16/562,938         | 9/6/2019    | Association and Tracking for Autonomous Devices                                   | 11,348,339    | UATC, LLC              |
| US      | 17/725,879         | 4/21/2022   | Association and Tracking for Autonomous Devices                                   |               | UATC, LLC              |
| US      | 62/886,001         | 8/13/2019   | Association and Tracking for Autonomous Devices                                   |               | UATC, LLC              |
| US      | 16/710,262         | 12/11/2019  | Microphone Array for Sound Source Detection and Location                          | 11,237,241    | UATC, LLC              |
| US      | 17/587,087         | 1/28/2022   | Microphone Array for Sound Source Detection and Location                          |               | UATC, LLC              |
| US      | 62/913,429         | 10/10/2019  | Microphone Array for Sound Source Detection and Location                          |               | UATC, LLC              |
| US      | 16/594,876         | 10/7/2019   | Hardware in Loop Testing and Generation of Latency Profiles for Use in Simulation | 11,194,939    | UATC, LLC              |
| US      | 17/521,349         | 11/8/2021   | Hardware in Loop Testing and Generation of Latency Profiles for Use in Simulation | 11,604,908    | UATC, LLC              |
| US      | 62/888,034         | 8/16/2019   | Hardware in Loop Testing for Generation of Latency Profiles for Use in Simulation |               | UATC, LLC              |
| US      | 16/825,539         | 3/20/2020   | Full Uncertainty for Motion Planning in Autonomous Vehicles                       | 11,634,162    | UATC, LLC              |
| US      | 18/305,882         | 4/24/2023   | Full Uncertainty for Motion Planning in Autonomous Vehicles                       |               | UATC, LLC              |
| US      | 62/887,760         | 8/16/2019   | Full Uncertainty for Motion Planning in Autonomous Vehicles                       |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|---|---------------|------------------------|
| US      | 16/654,469         | 10/16/2019  | Methods and Systems for Autonomous Vehicle Motion Deviation       | 11,249,484    | UATC, LLC              |
| US      | 17/665,957         | 2/7/2022    | Methods and Systems for Autonomous Vehicle Motion Deviation       |               | UATC, LLC              |
| US      | 62/864,843         | 6/21/2019   | Methods and Systems for Motion Planning for an Autonomous Vehicle |               | UATC, LLC              |
| US      | 16/717,058         | 12/17/2019  | Autonomous Vehicle Control for Reverse Motion                     | 11,148,668    | UATC, LLC              |
| US      | 62/915,302         | 10/15/2019  | Autonomous Vehicle Control for Reverse Motion                     |               | UATC, LLC              |
| US      | 15/074,892         | 3/18/2016   | SECURE START SYSTEM FOR AN AUTONOMOUS VEHICLE                     | 10,089,116    | UATC, LLC              |
| US      | 15/074,924         | 3/18/2016   | SECURE START SYSTEM FOR AN AUTONOMOUS VEHICLE                     | 9,946,890     | UATC, LLC              |
| US      | 15/874,549         | 1/18/2018   | SECURE START SYSTEM FOR AN AUTONOMOUS VEHICLE                     | 10,140,468    | UATC, LLC              |
| US      | 16/048,835         | 7/30/2018   | SECURE START SYSTEM FOR AN AUTONOMOUS VEHICLE                     | 10,891,138    | UATC, LLC              |
| US      | 17/145,821         | 1/11/2021   | SECURE START SYSTEM FOR AN AUTONOMOUS VEHICLE                     |               | UATC, LLC              |
| US      | 62/821,354         | 3/20/2019   | Systems and Methods for Autonomous Vehicles                       |               | UATC, LLC              |
| US      | 16/575,855         | 9/19/2019   | Semantic Segmentation of Radar Data                               | 11,703,562    | UATC, LLC              |
| US      | 62/870,998         | 7/5/2019    | Sensor Output Segmentation  |               | UATC, LLC              |
| US      | 62/822,836         | 3/23/2019   | PolyTransform: Deep Polygon Transformer for Instance Segmentation |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 16/826,895         | 3/23/2020   | Perception and Motion Prediction for Autonomous Devices  | 11,548,533    | UATC, LLC              |
| US      | 62/822,837         | 3/23/2019   | PnPNet: Learning Temporal Instance Representations for Joint Perception and Motion Forecasting                                     |               | UATC, LLC              |
| US      | 62/942,380         | 12/2/2019   | Perception and Motion Prediction for Autonomous Devices  |               | UATC, LLC              |
| US      | 62/822,838         | 3/23/2019   | Deformable Filter Convolution for Point Cloud Reasoning  |               | UATC, LLC              |
| US      | 62/822,840         | 3/23/2019   | Network Automatic Pruning  |               | UATC, LLC              |
| US      | 16/825,518         | 3/20/2020   | System and Methods for Generating High Definition Maps Using Machine-Learned Models to Analyze Topology Data Gathered From Sensors |               | UATC, LLC              |
| US      | 62/822,841         | 3/23/2019   | Learning to Map by Discovering Lane Topology   |               | UATC, LLC              |
| US      | 62/942,494         | 12/2/2019   | System and Methods for Generating High Definition Maps Using Machine-Learned Models to Analyze Topology Data Gathered From Sensors |               | UATC, LLC              |
| US      | 16/825,095         | 3/20/2020   | Compression of Images Having Overlapping Fields of View Using Machine-Learned Models   | 11,019,364    | UATC, LLC              |
| US      | 17/307,537         | 5/4/2021    | Compression of Images Having Overlapping Fields of View Using Machine-Learned Models   | 11,245,927    | UATC, LLC              |
| US      | 62/822,842         | 3/23/2019   | Deep Stereo Image Compression  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/969,990         | 2/4/2020    | Joint Image Compression Using Machine-Learned Models   |               | UATC, LLC              |
| US      | 62/822,843         | 3/23/2019   | Learning Joint 2D-3D Representations for Depth Completion  |               | UATC, LLC              |
| US      | 16/826,990         | 3/23/2020   | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC SENSOR DATA VIA MACHINE LEARNING                      | 11,544,167    | UATC, LLC              |
| US      | 17/727,085         | 4/22/2022   | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC SENSOR DATA VIA MACHINE LEARNING                      | 11,797,407    | UATC, LLC              |
| US      | 18/466,286         | 9/13/2023   | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC SENSOR DATA VIA MACHINE LEARNING                      |               | UATC, LLC              |
| US      | 62/822,844         | 3/23/2019   | LidarSIM: Realistic LiDAR Simulation by Leveraging the Real World                                  |               | UATC, LLC              |
| US      | 62/950,279         | 12/19/2019  | Systems and Methods for Generating Synthetic Light Detection and Ranging Data via Machine Learning |               | UATC, LLC              |
| US      | 15/451,206         | 3/6/2017    | DYNAMIC RANGE SETTING FOR VEHICULAR RADARS   | 10,509,121    | UATC, LLC              |
| US      | 62/304,131         | 3/4/2016    | DYNAMIC RANGE SETTING FOR VEHICULAR RADARS   |               | UATC, LLC              |
| US      | 16/826,924         | 3/23/2020   | Depth Estimation for Autonomous Devices  | 11,423,563    | UATC, LLC              |
| US      | 17/891,231         | 8/19/2022   | Depth Estimation for Autonomous Devices  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
|---------|--------------------|-------------|--|---------------|------------------------|
| US      | 62/822,845         | 3/23/2019   | Differentiable Deep PatchMatch for Efficient Stereo Matching         |               | UATC, LLC              |
| US      | 62/971,282         | 2/7/2020    | Depth Estimation for Autonomous Devices                              |               | UATC, LLC              |
| US      | 62/822,846         | 3/23/2019   | Large-Scale Visual Localization in the Age of Self-Driving Cars      |               | UATC, LLC              |
| US      | 16/750,186         | 1/23/2020   | LIDAR FAULT DETECTION SYSTEM   | 11,543,535    | UATC, LLC              |
| US      | 18/076,081         | 12/6/2022   | LIDAR FAULT DETECTION SYSTEM   |               | UATC, LLC              |
| US      | 62/870,183         | 7/3/2019    | LIDAR FAULT DETECTION SYSTEM   |               | UATC, LLC              |
| US      | 16/863,311         | 4/30/2020   | Predictive Mobile Test Device Control for Autonomous Vehicle Testing | 11,551,494    | UATC, LLC              |
| US      | 62/952,819         | 12/23/2019  | Predictive Mobile Test Device Control for Autonomous Vehicle Testing |               | UATC, LLC              |
| US      | 16/707,529         | 12/9/2019   | Systems and Methods for Autonomous Vehicle Controls                  | 11,315,431    | UATC, LLC              |
| US      | 17/705,789         | 3/28/2022   | Systems and Methods for Autonomous Vehicle Controls                  |               | UATC, LLC              |
| US      | 62/912,847         | 10/9/2019   | Systems and Methods for Autonomous Vehicle Controls                  |               | UATC, LLC              |
| US      | 62/852,116         | 5/23/2019   | Learning to Remember from a Multi-Task Teacher                       |               | UATC, LLC              |
| US      | 29/712,846         | 11/12/2019  | Tablet Holder for an Autonomous Vehicle                              |               | UATC, LLC              |
| US      | 16/853,151         | 4/20/2020   | Goal-Directed Occupancy Prediction for Autonomous Driving            | 11,531,346    | UATC, LLC              |
| US      | 62/870,934         | 7/5/2019    | Goal-Directed Occupancy Prediction for Lane-Following Actors         |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/991,799         | 3/19/2020   | Goal-Directed Occupancy Prediction For Autonomous Driving  |               | UATC, LLC              |
| US      | 16/811,531         | 3/6/2020    | Systems and Methods for Detecting Surprise Movements of an Actor with Respect to an Autonomous Vehicle | 11,467,580    | UATC, LLC              |
| US      | 17/962,806         | 10/10/2022  | Systems and Methods for Detecting Surprise Movements of an Actor with Respect to an Autonomous Vehicle |               | UATC, LLC              |
| US      | 62/976,600         | 2/14/2020   | Systems and Methods for Detecting Surprise Movements of an Actor with Respect to an Autonomous Vehicle |               | UATC, LLC              |
| US      | 16/817,068         | 3/12/2020   | Systems and Methods for Generating Behavioral Predictions in Reaction to Autonomous Vehicle Movement   | 11891087      | UATC, LLC              |
| US      | 18/416,490         | 1/18/2024   | Systems and Methods for Generating Behavioral Predictions in Reaction to Autonomous Vehicle Movement   |               | UATC, LLC              |
| US      | 62/951,628         | 12/20/2019  | Systems and Methods for Generating Behavioral Predictions in Reaction to Autonomous Vehicle Movement   |               | UATC, LLC              |
| US      | 61/738,646         | 12/18/2012  | LIGHT DETECTING AND RANGING SENSING APPARATUS AND METHODS  |               | UATC, LLC              |
| US      | 15/136,876         | 4/22/2016   | EXTERNAL SENSOR ASSEMBLY FOR VEHICLES  | 10,343,620    | UATC, LLC              |
| US      | 16/504,049         | 7/5/2019    | EXTERNAL SENSOR ASSEMBLY FOR VEHICLES  | 11,472,349    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 16/801,933         | 2/26/2020   | Systems and Methods for Generating Motion Forecast Data for a Plurality of Actors with Respect to an Autonomous Vehicle                                    | 11,691,650    | UATC, LLC              |
| US      | 62/871,436         | 7/8/2019    | End-to-end Contextual Perception and Prediction with Interaction Transformer   |               | UATC, LLC              |
| US      | 62/930,620         | 11/5/2019   | Systems and Methods for Generating Motion Forecast Data for a Plurality of Actors with Respect to an Autonomous Vehicle                                    |               | UATC, LLC              |
| US      | 16/816,671         | 3/12/2020   | Systems and Methods for Generating Motion Forecast Data for Actors with Respect to an Autonomous Vehicle and Training a Machine Learned Model for the Same | 11,636,307    | UATC, LLC              |
| US      | 18/186,718         | 3/20/2023   | Systems and Methods for Generating Motion Forecast Data for Actors with Respect to an Autonomous Vehicle and Training a Machine Learned Model for the Same |               | UATC, LLC              |
| US      | 62/871,452         | 7/8/2019    | SpAGNN: Spatially-Aware Graph Neural Networks for Relational Behavior Forecasting from Sensor Data   |               | UATC, LLC              |
| US      | 62/926,826         | 10/28/2019  | Systems and Methods for Generating Motion Forecast Data for Actors with Respect to an Autonomous Vehicle and Training a Machine Learned Model for the Same |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/825,266         | 3/20/2020   | Systems and Methods for Identifying Unknown Instances   | 11,475,675    | UATC, LLC              |
| US      | 17/967,710         | 10/17/2022  | Systems and Methods for Identifying Unknown Instances   | 11,769,058    | UATC, LLC              |
| US      | 62/871,458         | 7/8/2019    | Identifying Unknown Instances for Autonomous Driving  |               | UATC, LLC              |
| US      | 62/925,288         | 10/24/2019  | Systems and Methods for Identifying Unknown Instances   |               | UATC, LLC              |
| US      | 15/219,035         | 7/25/2016   | Automated Tasking and Accuracy Assessment Systems and Methods for Assigning and Assessing Individuals and Tasks | 10,733,556    | UATC, LLC              |
| US      | 15/588,478         | 5/5/2017    | Automated Accuracy Assessment in Tasking System   |               | UATC, LLC              |
| US      | 16/553,654         | 8/28/2019   | Automated Accuracy Assessment in Tasking System   |               | UATC, LLC              |
| US      | 62/333,764         | 5/9/2016    | Tasking System  |               | UATC, LLC              |
| US      | 62/459,026         | 2/14/2017   | Automated Accuracy Assessment in Tasking System   |               | UATC, LLC              |
| US      | 15/914,416         | 3/7/2018    | Segmentation of Images  |               | UATC, LLC              |
| US      | 62/468,235         | 3/7/2017    | Segmentation and Directionality of Images   |               | UATC, LLC              |
| US      | 62/489,402         | 4/24/2017   | Segmentation and Directionality of Images   |               | UATC, LLC              |
| US      | 62/775,815         | 12/5/2018   | Combining Optical Flow and Semantic Segmentation for Automated Annotation and Quality Control                   |               | UATC, LLC              |
| US      | 16/720,660         | 12/19/2019  | Autonomous Vehicle Having a Configurable Passenger Seat   | 11,318,865    | UATC, LLC              |
| US      | 62/947,658         | 12/13/2019  | Autonomous Vehicle Having a Configurable Passenger Seat   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 62/892,756         | 8/28/2019   | Radar Simulation  |               | UATC, LLC              |
| US      | 62/892,778         | 8/28/2019   | Dynamic Object Removal  |               | UATC, LLC              |
| US      | 16/863,341         | 4/30/2020   | Autonomous Vehicle Control Based on Risk-Based Interactions                       | 11,377,120    | UATC, LLC              |
| US      | 62/983,204         | 2/28/2020   | Autonomous Vehicle Control Based on Risk-Based Interactions                       |               | UATC, LLC              |
| US      | 29/563,210         | 5/3/2016    | EXTERNAL SENSOR ASSEMBLY FOR VEHICLES   | D851,508      | UATC, LLC              |
| US      | 17/014,168         | 9/8/2020    | Method for Using Lateral Motion to Optimize Trajectories for Autonomous Vehicles  | 11,390,300    | UATC, LLC              |
| US      | 62/923,210         | 10/18/2019  | Methods for Using Lateral Motion to Optimize Trajectories for Autonomous Vehicles |               | UATC, LLC              |
| US      | 16/832,758         | 3/27/2020   | Systems and Methods for Vehicle Spatial Path Sampling                             | 11,520,338    | UATC, LLC              |
| US      | 18/074,770         | 12/5/2022   | Systems and Methods for Vehicle Spatial Path Sampling                             |               | UATC, LLC              |
| US      | 62/982,436         | 2/27/2020   | Systems and Methods for Vehicle Spatial Path Sampling                             |               | UATC, LLC              |
| US      | 16/783,762         | 2/6/2020    | Systems and Methods for Training Predictive Models for Autonomous Devices         | 11,442,459    | UATC, LLC              |
| US      | 17/941,335         | 9/9/2022    | Systems and Methods for Training Predictive Models for Autonomous Devices         | 11,762,391    | UATC, LLC              |
| US      | 62/946,512         | 12/11/2019  | Systems and Methods for Training Predictive Models for Autonomous Devices         |               | UATC, LLC              |
| US      | 16/805,714         | 2/29/2020   | Trajectory Prediction for Autonomous Devices                                      | 11,420,648    | UATC, LLC              |
| US      | 17/873,288         | 7/26/2022   | Trajectory Prediction for Autonomous Devices                                      | 11,851,087    | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/978,629         | 2/19/2020   | Trajectory Prediction for Autonomous Devices   |               | UATC, LLC              |
| US      | 62/899,960         | 9/13/2019   | 3D-to-3D Style Transfer via Deep Soft Registration   |               | UATC, LLC              |
| US      | 62/900,632         | 9/15/2019   | Learning an Uncertainty Aware Object Detector for Autonomous Driving                           |               | UATC, LLC              |
| US      | 62/901,546         | 9/17/2019   | Joint Interaction and Trajectory Prediction for Autonomous Driving using Graph Neural Networks |               | UATC, LLC              |
| US      | 62/901,480         | 9/17/2019   | Movement Prediction of Traffic Actors using Off-road Loss and Bias Mitigation                  |               | UATC, LLC              |
| US      | 62/943,543         | 12/4/2019   | Systems and Methods for Computational Resource Allocation for Autonomous Vehicles              |               | UATC, LLC              |
| US      | 16/711,595         | 12/12/2019  | Systems and Methods for Computational Resource Allocation for Autonomous Vehicles              | 11,735,045    | UATC, LLC              |
| US      |                    |             | Systems and Methods for Computational Resource Allocation for Autonomous Vehicles              |               | UATC, LLC              |
| US      | 16/866,965         | 5/5/2020    | Systems and Methods for Onboard Vehicle Certificate Distribution                               | 11,606,215    | UATC, LLC              |
| US      | 18/172,735         | 2/22/2023   | Systems and Methods for Onboard Vehicle Certificate Distribution                               |               | UATC, LLC              |
| US      | 62/990,055         | 3/16/2020   | Systems and Methods for Onboard Vehicle Certificate Distribution                               |               | UATC, LLC              |
| US      | 15/238,093         | 8/16/2016   | AUTONOMOUS VEHICLE DIAGNOSTIC SYSTEM   | 10,137,903    | UATC, LLC              |
| US      | 16/866,973         | 5/5/2020    | Systems and Methods for Vehicle Message Signing  | 11,792,014    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 18/462,202         | 9/6/2023    | Systems and Methods for Vehicle Message Signing                              |               | UATC, LLC              |
| US      | 62/990,049         | 3/16/2020   | Systems and Methods for Vehicle Message Signing                              |               | UATC, LLC              |
| US      | 16/866,977         | 5/5/2020    | Systems and Methods for Servicing Vehicle Messages                           |               | UATC, LLC              |
| US      | 62/990,040         | 3/16/2020   | Systems and Methods for Servicing Vehicle Messages                           |               | UATC, LLC              |
| US      | 62/994,500         | 3/25/2020   | Systems and Methods for Servicing Vehicle Messages                           |               | UATC, LLC              |
| US      | 16/832,652         | 3/27/2020   | Vehicle Computing System Cooling Systems                                     | 11,287,806    | UATC, LLC              |
| US      | 16/832,675         | 3/27/2020   | Vehicle Computing System Cooling Systems                                     | 11,126,165    | UATC, LLC              |
| US      | 17/462,919         | 8/31/2021   | Vehicle Computing System Cooling Systems                                     | 11,537,106    | UATC, LLC              |
| US      | 62/972,955         | 2/11/2020   | Vehicle Computing System Cooling Systems                                     |               | UATC, LLC              |
| US      | 16/824,258         | 3/19/2020   | Deterministic Container-Based Network Configurations for Autonomous Vehicles | 11,522,836    | UATC, LLC              |
| US      | 62/981,307         | 2/25/2020   | Deterministic Container-Based Network Configurations for Autonomous Vehicles |               | UATC, LLC              |
| US      | 16/841,047         | 4/6/2020    | Radar Validation and Calibration   |               | UATC, LLC              |
| US      | 17/870,711         | 7/21/2022   | Sensor Validation and Calibration  |               | UATC, LLC              |
| US      | 62/990,694         | 3/17/2020   | Radar Validation and Calibration   |               | UATC, LLC              |
| US      | 16/893,617         | 6/5/2020    | Autonomous Vehicle Computing System with Processing Assurance                | 11,458,997    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/893,630         | 6/5/2020    | Asynchronous Processing for Autonomous Vehicle Computing Systems                    | 11,814,083    | UATC, LLC              |
| US      | 16/893,657         | 6/5/2020    | Autonomous Vehicle Computing System Compute Architecture for Assured Processing     | 11,697,433    | UATC, LLC              |
| US      | 63/002,675         | 3/31/2020   | AUTONOMOUS VEHICLE COMPUTING SYSTEM COMPUTE ARCHITECTURE FOR ASSURED PROCESSING     |               | UATC, LLC              |
| US      | 16/854,486         | 4/21/2020   | System and Methods for Calibrating Cameras with a Fixed Focal Point                 | 11,423,573    | UATC, LLC              |
| US      | 62/964,396         | 1/22/2020   | System and Methods for Calibrating Cameras with a Fixed Focal Point                 |               | UATC, LLC              |
| US      | 17/007,651         | 8/31/2020   | Systems and Methods for Training Object Detection Models Using Adversarial Examples | 11,686,848    | UATC, LLC              |
| US      | 62/936,421         | 11/16/2019  | Towards Physically Realistic Adversarial Examples for LiDAR Object Detection        |               | UATC, LLC              |
| US      | 63/021,942         | 5/8/2020    | Systems and Methods for Training Object Detection Models Using Adversarial Examples |               | UATC, LLC              |
| US      | 17/014,457         | 9/8/2020    | Systems and Methods for Answering Region Specific Questions                         | 11,620,838    | UATC, LLC              |
| US      | 62/936,425         | 11/16/2019  | Universal Spatial Embeddings for Question Answering in Self-Driving                 |               | UATC, LLC              |
| US      | 63/020,166         | 5/5/2020    | Systems and Methods for Answering Region Specific Questions                         |               | UATC, LLC              |
| US      | 17/018,499         | 9/11/2020   | Localization with Diverse Dataset for Autonomous Vehicles                           | 11,820,397    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 62/936,434         | 11/16/2019  | Global Localization in the Age of Self-Driving Cars  |               | UATC, LLC              |
| US      | 63/027,542         | 5/20/2020   | Localization with Diverse Dataset for Autonomous Vehicles  |               | UATC, LLC              |
| US      | 15/202,412         | 7/5/2016    | AUTONOMOUS VEHICLE PERFORMANCE OPTIMIZATION SYSTEM   | 9,884,630     | UATC, LLC              |
| US      | 15/858,872         | 12/29/2017  | AUTONOMOUS VEHICLE PERFORMANCE OPTIMIZATION SYSTEM   | 10,392,025    | UATC, LLC              |
| US      | 17/007,667         | 8/31/2020   | Systems and Methods for Predicting Instance Geometry   |               | UATC, LLC              |
| US      | 62/936,450         | 11/16/2019  | PolyTransform: Deep Polygon Transformer for Instance Segmentation                                    |               | UATC, LLC              |
| US      | 63/021,943         | 5/8/2020    | Systems and Methods for Predicting Instance Geometry   |               | UATC, LLC              |
| US      | 62/936,423         | 11/16/2019  | Object Trajectory Evolution for End-to-End Perception and Prediction                                 |               | UATC, LLC              |
| US      | 62/936,439         | 11/16/2019  | LiDARsim: Realistic LiDAR Simulation by Leveraging the Real World                                    |               | UATC, LLC              |
| US      | 17/066,096         | 10/8/2020   | Systems and Methods for Vehicle-to-Vehicle Communications for Improved Autonomous Vehicle Operations | 11,760,385    | UATC, LLC              |
| US      | 17/066,104         | 10/8/2020   | Systems and Methods for Vehicle-to-Vehicle Communications for Improved Autonomous Vehicle Operations | 11,685,403    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 17/066,108         | 10/8/2020   | Systems and Methods for Vehicle-to-Vehicle Communications for Improved Autonomous Vehicle Operations                    | 11,760,386    | UATC, LLC              |
| US      | 62/936,436         | 11/16/2019  | V2VNet: Vehicle-to-Vehicle Communication for Joint Perception and Prediction  |               | UATC, LLC              |
| US      | 63/034,152         | 6/3/2020    | Systems and Methods for Vehicle-to-Vehicle Communications for Improved Autonomous Vehicle Operations                    |               | UATC, LLC              |
| US      | 17/017,020         | 9/10/2020   | Conditional Entropy Coding for Efficient Video Compression  | 11,375,194    | UATC, LLC              |
| US      | 62/936,431         | 11/16/2019  | Conditional Entropy Coding for Efficient Video Compression  |               | UATC, LLC              |
| US      | 63/026,252         | 5/18/2020   | Conditional Entropy Coding for Efficient Video Compression  |               | UATC, LLC              |
| US      | 17/010,416         | 9/2/2020    | Systems and Methods for Generating Motion Forecast Data for a Plurality of Actors with Respect to an Autonomous Vehicle | 11,780,472    | UATC, LLC              |
| US      | 18/240,771         | 8/31/2023   | Systems and Methods for Generating Motion Forecast Data for a Plurality of Actors with Respect to an Autonomous Vehicle |               | UATC, LLC              |
| US      | 62/936,438         | 11/16/2019  | End-to-End Contextual Perception and Prediction with Interaction Transformer  |               | UATC, LLC              |
| US      | 63/022,806         | 5/11/2020   | Systems and Methods for Generating Motion Forecast Data for a Plurality of Actors with Respect to an Autonomous Vehicle |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 62/936,417         | 11/16/2019  | Product-Quantized SGD: An Efficient Baseline for Neural Network Compression               |               | UATC, LLC              |
| US      | 62/936,418         | 11/16/2019  | Learning Lane Graph Representations for Motion Forecasting                                |               | UATC, LLC              |
| US      | 62/936,430         | 11/16/2019  | Unsupervised 3D Shape Completion in the Wild  |               | UATC, LLC              |
| US      | 17/017,104         | 9/10/2020   | High Quality Instance Segmentation  | 11,410,315    | UATC, LLC              |
| US      | 17/878,408         | 8/1/2022    | High Quality Instance Segmentation  | 11,734,828    | UATC, LLC              |
| US      | 62/936,448         | 11/16/2019  | LevelSet R-CNN  |               | UATC, LLC              |
| US      | 63/024,847         | 5/14/2020   | High Quality Instance Segmentation  |               | UATC, LLC              |
| US      | 15/166,538         | 5/27/2016   | VEHICLE SENSOR CALIBRATION SYSTEM   | 9,952,317     | UATC, LLC              |
| US      | 15/812,872         | 11/14/2017  | VEHICLE SENSOR CALIBRATION SYSTEM   | 10,718,856    | UATC, LLC              |
| US      | 16/932,133         | 7/17/2020   | VEHICLE SENSOR CALIBRATION SYSTEM   | 11,009,594    | UATC, LLC              |
| US      | 17/321,045         | 5/14/2021   | Vehicle Sensor Calibration System   |               | UATC, LLC              |
| US      | 62/936,429         | 11/16/2019  | Geometrically-Driven Dynamic Object Removal for Self-Driving Video Simulation             |               | UATC, LLC              |
| US      | 62/936,446         | 11/16/2019  | Generating Shape-Aware Adversarial 3D Point Clouds with Manifold Interaction              |               | UATC, LLC              |
| US      | 17/018,349         | 9/11/2020   | System And Methods for Encoding Octree Structured Point Cloud Data Using an Entropy Model | 11,676,310    | UATC, LLC              |
| US      | 62/936,428         | 11/16/2019  | OctSqueeze: Octree-Structured Entropy Model for LiDAR Compression                         |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/022,014         | 5/8/2020    | System And Methods for Encoding Octree Structured Point Cloud Data Using an Entropy Model                          |               | UATC, LLC              |
| US      | 62/936,161         | 11/15/2019  | HCNAF: Hyper-Conditioned Neural Autoregressive Flow and its application in Probabilistic Occupancy Map Forecasting |               | UATC, LLC              |
| US      | 16/915,310         | 6/29/2020   | Systems and Methods for Handling Autonomous Vehicle Faults   |               | UATC, LLC              |
| US      | 63/013,842         | 4/22/2020   | Systems and Methods for Handling Autonomous Vehicle Faults   |               | UATC, LLC              |
| US      | 16/860,387         | 4/28/2020   | Vehicle Sensor Cleaning Systems  |               | UATC, LLC              |
| US      | 16/860,393         | 4/28/2020   | Vehicle Sensor Cleaning Systems  | 11,518,346    | UATC, LLC              |
| US      | 63/003,981         | 4/2/2020    | Vehicle Sensor Cleaning Systems  |               | UATC, LLC              |
| US      | 16/838,674         | 4/2/2020    | Systems and Methods for Detecting Actors with Respect to an Autonomous Vehicle                                     | 11,597,406    | UATC, LLC              |
| US      | 18/178,641         | 3/6/2023    | Systems and Methods for Detecting Actors with Respect to an Autonomous Vehicle                                     |               | UATC, LLC              |
| US      | 62/978,548         | 2/19/2020   | Systems and Methods for Detecting Actors with Respect to an Autonomous Vehicle                                     |               | UATC, LLC              |
| US      | 16/923,610         | 7/8/2020    | Passenger Seats and Doors for an Autonomous Vehicle  | 11,607,973    | UATC, LLC              |
| US      | 18/181,932         | 3/10/2023   | Passenger Seats and Doors for an Autonomous Vehicle  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 16/923,614         | 7/8/2020    | Passenger Seats and Doors for an Autonomous Vehicle                                      | 11,660,985    | UATC, LLC              |
| US      | 63/034,424         | 6/4/2020    | Passenger Seats and Doors for an Autonomous Vehicle                                      |               | UATC, LLC              |
| US      | 16/923,620         | 7/8/2020    | Systems and Methods for Seat Reconfiguration for Autonomous Vehicles                     | 11,648,855    | UATC, LLC              |
| US      | 18/297,794         | 4/10/2023   | Systems and Methods for Seat Reconfiguration for Autonomous Vehicles                     |               | UATC, LLC              |
| US      | 63/034,426         | 6/4/2020    | Systems and Methods for Seat Reconfiguration for Autonomous Vehicles                     |               | UATC, LLC              |
| US      | 16/923,623         | 7/8/2020    | Systems and Methods for Dictating Routes for Bi-Directional Vehicles                     |               | UATC, LLC              |
| US      | 16/923,624         | 7/8/2020    | Systems and Methods for Dictating Routes for Bi-Directional Vehicles                     | 11,420,650    | UATC, LLC              |
| US      | 63/034,427         | 6/4/2020    | Systems and Methods for Dictating Motion in Bi-Directional Vehicles                      |               | UATC, LLC              |
| US      | 15/213,110         | 7/18/2016   | SENSOR CLEANING SYSTEM FOR VEHICLES  | 10,189,450    | UATC, LLC              |
| US      | 15/213,149         | 7/18/2016   | SENSOR CLEANING SYSTEM FOR VEHICLES  | 10,220,817    | UATC, LLC              |
| US      | 17/092,237         | 11/7/2020   | Systems and Methods for Generating Scenarios for AV Simulation Using Parametric Modeling | 11,893,323    | UATC, LLC              |
| US      | 63/088,765         | 10/7/2020   | Systems and Methods for Generating Scenarios for AV Simulation Using Parametric Modeling |               | UATC, LLC              |
| US      | 62/971,416         | 2/7/2020    | Hierarchical Verification for Adversarial Robustness                                     |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 17/032,509         | 9/25/2020   | Systems and Methods for Optimized Multi-Agent Routing Between Nodes                 |               | UATC, LLC              |
| US      | 62/971,422         | 2/7/2020    | Multi-Agent Routing Value Iteration Network   |               | UATC, LLC              |
| US      | 63/023,483         | 5/12/2020   | Systems and Methods for Optimized Multi-Agent Routing Between Nodes                 |               | UATC, LLC              |
| US      | 16/918,178         | 7/1/2020    | Systems and Methods for a Moveable Cover Panel of an Autonomous Vehicle             | 11,597,342    | UATC, LLC              |
| US      | 18/162,293         | 1/31/2023   | Systems and Methods for a Moveable Cover Panel of an Autonomous Vehicle             | 11897406      | UATC, LLC              |
| US      | 63/039,522         | 6/16/2020   | Systems and Methods for a Moveable Cover Panel of an Autonomous Vehicle             |               | UATC, LLC              |
| US      | 16/920,873         | 7/6/2020    | Systems and Methods for Integrating Autonomous Vehicles and Light Electric Vehicles |               | UATC, LLC              |
| US      | 63/039,738         | 6/16/2020   | Systems and Methods for Integrating Autonomous Vehicles and Light Electric Vehicles |               | UATC, LLC              |
| US      | 16/898,829         | 6/11/2020   | Light Detection and Ranging (LIDAR) Steering using Collimated Lenses                | 11,644,537    | UATC, LLC              |
| US      | 63/024,781         | 5/14/2020   | Light Detection and Ranging (LIDAR) Steering using Collimated Lenses                |               | UATC, LLC              |
| US      | 16/991,494         | 8/12/2020   | Systems and Methods for Optimizing Drop Test Configurations                         | 11,441,983    | UATC, LLC              |
| US      | 63/047,060         | 7/1/2020    | Systems and Methods for Optimizing Drop Test Configurations                         |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 16/921,320         | 7/6/2020    | Light Detection and Ranging (Lidar) System  |               | UATC, LLC              |
| US      | 63/018,036         | 4/30/2020   | Light Detection and Ranging (Lidar) System  |               | UATC, LLC              |
| US      | 17/150,798         | 1/15/2021   | Systems and Methods for Training Probabilistic Object Motion Prediction Models Using Non-Differentiable Prior Knowledge | 11,836,585    | UATC, LLC              |
| US      | 18/495,434         | 10/26/2023  | Systems and Methods for Training Probabilistic Object Motion Prediction Models Using Non-Differentiable Prior Knowledge |               | UATC, LLC              |
| US      | 62/984,034         | 3/2/2020    | Precise Multimodal Prediction with Prior Knowledge  |               | UATC, LLC              |
| US      | 63/123,251         | 12/9/2020   | Systems and Methods for Training Probabilistic Object Motion Prediction Models Using Non-Differentiable Prior Knowledge |               | UATC, LLC              |
| US      | 62/985,843         | 3/5/2020    | Deep Supervised Descent Method for Structured Inverse Problems  |               | UATC, LLC              |
| US      | 15/467,525         | 3/23/2017   | DYNAMIC SENSOR SELECTION FOR SELF-DRIVING VEHICLES  | 10,479,376    | UATC, LLC              |
| US      | 62/985,851         | 3/5/2020    | Recovering and Simulating Pedestrian in the Wild  |               | UATC, LLC              |
| US      | 17/150,987         | 1/15/2021   | Systems and Methods for Using Attention Masks to Improve Motion Planning  |               | UATC, LLC              |
| US      | 62/985,848         | 3/5/2020    | Perceive, Attend and Drive: Learning Spatial Attention for Safe Self-Driving  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/132,967         | 12/31/2020  | Systems and Methods for Using Attention Masks to Improve Motion Planning                            |               | UATC, LLC              |
| US      | 17/150,982         | 1/15/2021   | Systems and Methods for Autonomous Vehicle Systems Simulation                                       |               | UATC, LLC              |
| US      | 62/985,844         | 3/5/2020    | Testing the Safety of Self-driving Vehicles by Simulating Perception and Prediction                 |               | UATC, LLC              |
| US      | 63/111,913         | 11/10/2020  | Systems and Methods for Autonomous Vehicle Systems Simulation for Safety Testing                    |               | UATC, LLC              |
| US      | 17/150,590         | 1/15/2021   | Systems and Methods for Integrating Radar Data for Improved Object Detection in Autonomous Vehicles |               | UATC, LLC              |
| US      | 62/985,855         | 3/5/2020    | RadarNet: Exploiting Radar for Autonomous Vehicle Perception  |               | UATC, LLC              |
| US      | 63/133,000         | 12/31/2020  | Systems and Methods for Integrating Radar Data for Improved Object Detection in Autonomous Vehicles |               | UATC, LLC              |
| US      | 17/151,001         | 1/15/2021   | Systems and Methods for Training Machine-Learned Models with Deviating Intermediate Representations |               | UATC, LLC              |
| US      | 62/985,865         | 3/5/2020    | Adversarial Attacks On Multi-Agent Deep Learning Systems  |               | UATC, LLC              |
| US      | 63/132,780         | 12/31/2020  | Systems and Methods for Training Machine-Learned Models with Deviating Intermediate Representations |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 17/150,995         | 1/15/2021   | Systems and Methods for Latent Distribution Modeling for Scene-Consistent Motion Forecasting                                     | 11,842,530    | UATC, LLC              |
| US      | 18/519,976         | 11/27/2023  | Systems and Methods for Latent Distribution Modeling for Scene-Consistent Motion Forecasting                                     |               | UATC, LLC              |
| US      | 62/985,862         | 3/5/2020    | Implicit Latent Variable Model for Scene-Consistent Motion Forecasting   |               | UATC, LLC              |
| US      | 63/119,981         | 12/1/2020   | Systems and Methods for Latent Distribution Modeling for Scene-Consistent Motion Forecasting                                     |               | UATC, LLC              |
| US      | 62/985,852         | 3/5/2020    | Safety Oriented Approach for Pedestrian Occupancy Forecasting  |               | UATC, LLC              |
| US      | 17/150,984         | 1/15/2021   | Systems and Methods for Selecting Trajectories Based on Interpretable Semantic Representations                                   | 11,834,069    | UATC, LLC              |
| US      | 62/985,847         | 3/5/2020    | Perceive, Predict, and Plan: Safe Motion Planning Through Interpretable Semantic Representations                                 |               | UATC, LLC              |
| US      | 63/112,376         | 11/11/2020  | Systems and Methods for Selecting Trajectories Based on Interpretable Semantic Representations                                   |               | UATC, LLC              |
| US      | 17/091,577         | 11/6/2020   | Systems and Methods for Object Detection and Motion Prediction by Fusing Multiple Sensor Sweeps into a Range View Representation | 11,762,094    | UATC, LLC              |
| US      | 62/985,583         | 3/5/2020    | LaserFlow: Efficient and Probabilistic Object Detection and Motion Forecasting   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/017,930         | 4/30/2020   | RV-FuseNet: Range View based Fusion of Time-Series LiDAR Data for Joint 3D Object Detection and Motion Forecasting               |               | UATC, LLC              |
| US      | 63/104,146         | 10/22/2020  | Systems and Methods for Object Detection and Motion Prediction by Fusing Multiple Sensor Sweeps into a Range View Representation |               | UATC, LLC              |
| US      | 62/985,866         | 3/5/2020    | Learning Lane Graph Representations for Motion Forecasting   |               | UATC, LLC              |
| US      | 15/335,692         | 10/27/2016  | RADAR MULTIPATH PROCESSING   | 10,296,001    | UATC, LLC              |
| US      | 62/985,860         | 3/5/2020    | PQ-SGD: an efficient baseline for neural network compression   |               | UATC, LLC              |
| US      | 62/985,863         | 3/5/2020    | Universal Spatial Embeddings for Structured Question Answering in Self-Driving   |               | UATC, LLC              |
| US      | 16/910,554         | 6/24/2020   | System and Methods for Controlling State Transitions Using a Vehicle Controller  | 11,513,517    | UATC, LLC              |
| US      | 17/994,764         | 11/28/2022  | System and Methods for Controlling State Transitions Using a Vehicle Controller  | 11,768,490    | UATC, LLC              |
| US      | 63/001,838         | 3/30/2020   | System and Methods for Controlling State Transitions Using a Vehicle Controller  |               | UATC, LLC              |
| US      | 16/938,020         | 7/24/2020   | Object Trajectory Association and Tracking   | 11,577,723    | UATC, LLC              |
| US      | 63/045,486         | 6/29/2020   | Object Trajectory Association and Tracking   |               | UATC, LLC              |
| US      | 16/923,626         | 7/8/2020    | Systems and Methods for Safe Reconfiguration of a Vehicle Interior   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/034,428         | 6/4/2020    | Systems and Methods for Safe Reconfiguration of a Vehicle Interior  |               | UATC, LLC              |
| US      | 17/004,709         | 8/27/2020   | Light Detection and Ranging (LIDAR) System Having Rotatable Prism Disk for Beam Steering of Lasers  |               | UATC, LLC              |
| US      | 17/004,712         | 8/27/2020   | Multi-Channel Light Detection and Ranging (LIDAR) Unit Having a Telecentric Lens Assembly and Single Circuit Board For Emitters and Detectors | 11,681,048    | UATC, LLC              |
| US      | 18/313,777         | 5/8/2023    | Multi-Channel Light Detection and Ranging (LIDAR) Unit Having a Telecentric Lens Assembly and Single Circuit Board For Emitters and Detectors |               | UATC, LLC              |
| US      | 63/059,190         | 7/31/2020   | Light Detection and Ranging (LIDAR) System Having Rotatable Optics  |               | UATC, LLC              |
| US      | 17/028,203         | 9/22/2020   | Systems and Methods for Generating Vehicle Corridors to Improve Path Planning Efficiency  |               | UATC, LLC              |
| US      | 63/053,891         | 7/20/2020   | Systems and Methods for Generating Vehicle Corridors to Improve Path Planning Efficiency  |               | UATC, LLC              |
| US      | 17/062,067         | 10/2/2020   | Systems and Methods for Autonomous Vehicle Motion Control and Motion Path Adjustments   |               | UATC, LLC              |
| US      | 63/058,789         | 7/30/2020   | Systems and Methods for Autonomous Vehicle Motion Control and Motion Path Adjustments   |               | UATC, LLC              |
| US      | 17/062,168         | 10/2/2020   | Systems and Methods for Emergency Braking in Autonomous Vehicles  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/062,788         | 8/7/2020    | Systems and Methods for Emergency Braking in Autonomous Vehicles                     |               | UATC, LLC              |
| US      | 17/067,141         | 10/9/2020   | Systems and Methods for Generating Basis Paths for Autonomous Vehicle Motion Control | 11,561,548    | UATC, LLC              |
| US      | 18/158,251         | 1/23/2023   | Systems and Methods for Generating Basis Paths for Autonomous Vehicle Motion Control |               | UATC, LLC              |
| US      | 63/077,285         | 9/11/2020   | Systems and Methods for Generating Basis Paths for Autonomous Vehicle Motion Control |               | UATC, LLC              |
| US      | 15/295,088         | 10/17/2016  | NEURAL NETWORK SYSTEM FOR AUTONOMOUS VEHICLE CONTROL                                 | 10,452,068    | UATC, LLC              |
| US      | 17/005,667         | 8/28/2020   | Vehicle Trajectory Dynamics Validation and Interpolation                             | 11,518,393    | UATC, LLC              |
| US      | 63/059,442         | 7/31/2020   | Vehicle Trajectory Dynamics Validation and Interpolation                             |               | UATC, LLC              |
| US      | 17/130,124         | 12/22/2020  | Systems and Methods for Costing Autonomous Vehicle Maneuvers                         | 11,827,240    | UATC, LLC              |
| US      | 63/123,178         | 12/9/2020   | Systems and Methods for Costing Autonomous Vehicle Maneuvers                         |               | UATC, LLC              |
| US      | 17/030,973         | 9/24/2020   | Light Detection and Ranging (LIDAR) System Having a polarizing beam splitter         | 11,635,502    | UATC, LLC              |
| US      | 18/301,503         | 4/17/2023   | Light Detection and Ranging (LIDAR) System Having a polarizing beam splitter         |               | UATC, LLC              |
| US      | 63/064,721         | 8/12/2020   | Light Detection and Ranging (LIDAR) System Having a Diffractive Optic                |               | UATC, LLC              |
| US      | 63/032,021         | 5/29/2020   | MultiNet: Multistage Multiclass Multimodal Motion Prediction                         |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/035,571         | 6/5/2020    | MuSCLE: Multi Sweep Compression of LiDAR using Deep Entropy Models                         |               | UATC, LLC              |
| US      | 17/150,989         | 1/15/2021   | Photorealistic Image Simulation with Geometry-Aware Composition                            | 11,551,429    | UATC, LLC              |
| US      | 17/668,577         | 2/10/2022   | Photorealistic Image Simulation with Geometry-Aware Composition                            |               | UATC, LLC              |
| US      | 63/035,573         | 6/5/2020    | GeoSim: Photorealistic Image Simulation with Geometry-Aware Composition for Self-Driving   |               | UATC, LLC              |
| US      | 63/093,471         | 10/19/2020  | Photorealistic Image Simulation with Geometry-Aware Composition                            |               | UATC, LLC              |
| US      | 63/035,562         | 6/5/2020    | LoCo: Local Contrastive Representation Learning  |               | UATC, LLC              |
| US      | 17/340,870         | 6/7/2021    | Systems and Methods for Dynamic Object Removal from Three-Dimensional Data                 |               | UATC, LLC              |
| US      | 63/035,577         | 6/5/2020    | Learning Dynamic Object Removal in the Wild via Geometry-aware Multi-modal Representations |               | UATC, LLC              |
| US      | 17/085,634         | 10/30/2020  | Systems and Methods for Segregating Machine Learned Models for Distributed Processing      |               | UATC, LLC              |
| US      | 63/082,179         | 9/23/2020   | Systems and Methods for Segregating Machine Learned Models for Distributed Processing      |               | UATC, LLC              |
| US      | 17/094,843         | 11/11/2020  | Mounting Assembly for a Cabin Camera   | 11,740,540    | UATC, LLC              |
| US      | 63/104,112         | 10/22/2020  | Mounting Assembly for a Cabin Camera   |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/405,581         | 1/13/2017   | Charge Control System for Mobile Energy Storage Fleet  | 10,377,260    | UATC, LLC              |
| US      | 16/369,454         | 3/29/2019   | Charge Control System for Mobile Energy Storage Fleet  | 11,124,080    | UATC, LLC              |
| US      | 16/369,460         | 3/29/2019   | Charge Control System for Mobile Energy Storage Fleet  | 11,148,542    | UATC, LLC              |
| US      | 17/503,951         | 10/18/2021  | Charge Control System for Mobile Energy Storage Fleet  | 11,820,246    | UATC, LLC              |
| US      | 17/139,440         | 12/31/2020  | Systems and Methods for Compressing and Storing Sensor Data Collected by an Autonomous Vehicle |               | UATC, LLC              |
| US      | 63/090,536         | 10/12/2020  | Systems and Methods for Compressing and Storing Sensor Data Collected by an Autonomous Vehicle |               | UATC, LLC              |
| US      | 17/395,227         | 8/5/2021    | LIGHT DETECTION AND RANGING (LIDAR) SYSTEM HAVING TRANSMIT OPTICS FOR PRE-COLLIMATION STEERING |               | UATC, LLC              |
| US      | 63/062,657         | 8/7/2020    | Short range LIDAR Using Pre-Collimated Steering  |               | UATC, LLC              |
| US      | 17/387,276         | 7/28/2021   | Systems and Methods for Interaction-Based Trajectory Prediction                                |               | UATC, LLC              |
| US      | 63/057,510         | 7/28/2020   | Interaction-Based Trajectory Prediction Over a Hybrid Traffic Graph                            |               | UATC, LLC              |
| US      | 63/057,672         | 7/28/2020   | Multi-View Fusion of Sensor Data for Improved Perception and Prediction in Autonomous Driving  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/057,522         | 7/28/2020   | Imitative Planning using Conditional Normalizing Flow                                  |               | UATC, LLC              |
| US      | 17/095,227         | 11/11/2020  | Systems and Methods for End-to-End Trajectory Prediction Using Radar, Lidar, and Maps  |               | UATC, LLC              |
| US      | 63/057,632         | 7/28/2020   | LiRaNet: End-to-End Trajectory Prediction by Fusing Radar with Lidar and Maps          |               | UATC, LLC              |
| US      | 63/107,907         | 10/30/2020  | Systems and Methods for End-To-End Trajectory Prediction Using Radar, Lidar, and Maps  |               | UATC, LLC              |
| US      | 17/150,998         | 1/15/2021   | Systems and Methods for Mitigating Vehicle Pose Error Across an Aggregated Feature Map |               | UATC, LLC              |
| US      | 63/058,040         | 7/29/2020   | Learning to Communicate and Correct Pose Errors  |               | UATC, LLC              |
| US      | 63/132,792         | 12/31/2020  | Systems and Methods for Mitigating Vehicle Pose Error Across an Aggregated Feature Map |               | UATC, LLC              |
| US      | 17/388,372         | 7/29/2021   | Systems and Methods for Simulating Dynamic Objects Based on Real World Data            |               | UATC, LLC              |
| US      | 63/058,052         | 7/29/2020   | Recovering and Simulating Pedestrians in the Wild                                      |               | UATC, LLC              |
| US      | 17/388,781         | 7/29/2021   | Compression of Machine-Learned Models by Vector Quantization                           |               | UATC, LLC              |
| US      | 63/058,041         | 7/29/2020   | On the Compression of Deep Neural Networks using Vector Quantization                   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 17/388,848         | 7/29/2021   | Systems and Methods for Sensor Data Packet Processing and Spatial Memory Updating for Robotic Platforms                      |               | UATC, LLC              |
| US      | 63/058,043         | 7/29/2020   | StrObe: Streaming Object Detection from LiDAR Packets  |               | UATC, LLC              |
| US      | 14/050,036         | 10/9/2013   | MULTI-CLAD FIBER BASED OPTICAL APPARATUS AND METHODS FOR LIGHT DETECTION AND RANGING SENSORS                                 | 9,823,351     | UATC, LLC              |
| US      | 15/809,666         | 11/10/2017  | MULTI-CLAD FIBER-BASED LIGHT DETECTION AND RANGING SENSOR  | 10,126,426    | UATC, LLC              |
| US      | 14/107,739         | 12/16/2013  | LIGHT DETECTING AND RANGING SENSING APPARATUS AND METHODS  |               | UATC, LLC              |
| US      | 15/345,120         | 11/7/2016   | LIDAR SCANNER WITH OPTICAL AMPLIFICATION   |               | UATC, LLC              |
| US      | 15/392,274         | 12/28/2016  | Decreasing autonomous vehicle power consumption  | 10,343,631    | UATC, LLC              |
| US      | 17/140,597         | 1/4/2021    | Systems and Methods for Generation and Utilization of Vehicle Testing Knowledge Structures for Autonomous Vehicle Simulation |               | UATC, LLC              |
| US      | 63/129,171         | 12/22/2020  | Systems and Methods for Generation and Utilization of Vehicle Testing Knowledge Structures for Autonomous Vehicle Simulation |               | UATC, LLC              |
| US      | 17/140,606         | 1/4/2021    | Systems and Methods for Error Sourcing in Autonomous Vehicle Simulation  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/129,173         | 12/22/2020  | Systems and Methods for Error Sourcing in Autonomous Vehicle Simulation   |               | UATC, LLC              |
| US      | 17/129,961         | 12/22/2020  | Light Detection and Ranging (LIDAR) Assembly Having a Switchable Mirror   |               | UATC, LLC              |
| US      | 63/123,074         | 12/9/2020   | Light Detection and Ranging (LIDAR) Assembly Having a Switchable Mirror   |               | UATC, LLC              |
| US      | 17/129,962         | 12/22/2020  | Light Detection and Ranging (LIDAR) Assembly Using a Dichroic Optic to Widen a Field of View                    |               | UATC, LLC              |
| US      | 63/111,296         | 11/9/2020   | Light Detection And Ranging (LIDAR) Assembly Having a Dichroic Optic  |               | UATC, LLC              |
| US      | 17/492,142         | 10/1/2021   | Metrics for Evaluating Autonomous Vehicle Performance   |               | UATC, LLC              |
| US      | 63/086,306         | 10/1/2020   | Beelines: Evaluating Motion Prediction Impact on Self-Driving Safety and Comfort                                |               | UATC, LLC              |
| US      | 63/091,396         | 10/14/2020  | Uncertainty-aware Orientation Prediction for Joint Detection-Prediction Models                                  |               | UATC, LLC              |
| US      | 63/108,322         | 10/31/2020  | Uncertainty-Aware Orientation Estimation for Joint Detection-Prediction Models                                  |               | UATC, LLC              |
| US      | 17/501,614         | 10/14/2021  | Systems and Methods for Sensor Data Processing and Object Detection and Motion Prediction for Robotic Platforms |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/091,401         | 10/14/2020  | Investigating Effect of Sensor Modalities in Multi-Sensor Detection-Prediction Models               |               | UATC, LLC              |
| US      | 63/091,728         | 10/14/2020  | Temporally-Continuous Probabilistic Prediction using Polynomial Trajectory Parameterization         |               | UATC, LLC              |
| US      | 17/501,480         | 10/14/2021  | Systems and Methods for Generating Physically Realistic Trajectories                                |               | UATC, LLC              |
| US      | 63/091,404         | 10/14/2020  | PPNet: Combining Robotics With Machine Learning To Produce Physically Realistic Trajectories        |               | UATC, LLC              |
| US      | 63/092,581         | 10/16/2020  | Modified Neural Radiance Fields   |               | UATC, LLC              |
| US      | 15/378,894         | 12/14/2016  | Vehicle Servicing System  | 9,817,400     | UATC, LLC              |
| US      | 15/784,594         | 10/16/2017  | Vehicle Servicing System  | 10,025,310    | UATC, LLC              |
| US      | 16/029,075         | 7/6/2018    | Vehicle Servicing System  | 11,249,478    | UATC, LLC              |
| US      | 14/732,555         | 6/5/2015    | SMART VEHICLE   | 9,711,050     | UATC, LLC              |
| US      | 15/624,234         | 6/15/2017   | SMART VEHICLE   |               | UATC, LLC              |
| US      | 17/138,014         | 12/30/2020  | Sensor Platform for Autonomous Vehicles   | 11,743,564    | UATC, LLC              |
| US      | 63/104,125         | 10/22/2020  | Near-Range Camera Assembly for Vehicles   |               | UATC, LLC              |
| US      | 17/515,923         | 11/1/2021   | Systems and Methods for Simultaneous Localization and Mapping Using Asynchronous Multi-View Cameras |               | UATC, LLC              |
| US      | 63/107,806         | 10/30/2020  | Asynchronous Multi-View SLAM  |               | UATC, LLC              |
| US      | 17/516,260         | 11/1/2021   | Systems and Methods for Interactive Prediction and Planning   | 11,858,536    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/108,340         | 10/31/2020  | Joint Structured Model for Reactive Prediction and Planning                         |               | UATC, LLC              |
| US      | 63/108,325         | 10/31/2020  | Ellipse Loss For Scene-Compliant Motion Prediction                                  |               | UATC, LLC              |
| US      | 17/528,549         | 11/17/2021  | Generating Motion Scenarios for Self-Driving Vehicles                               |               | UATC, LLC              |
| US      | 63/114,782         | 11/17/2020  | AdvSim: Generating Safety-Critical Scenarios for Self-Driving Vehicles              |               | UATC, LLC              |
| US      | 17/528,577         | 11/17/2021  | SYSTEMS AND METHODS FOR GENERATING SYNTHETIC MOTION PREDICTIONS                     |               | UATC, LLC              |
| US      | 63/114,862         | 11/17/2020  | TrafficSim: Learning to Simulate Realistic Multi-Agent Behaviors                    |               | UATC, LLC              |
| US      | 63/114,784         | 11/17/2020  | Self-supervised Representation Learning From Flow Equivariance                      |               | UATC, LLC              |
| US      | 63/114,870         | 11/17/2020  | Exploring Adversarial Robustness of Multi-sensor Perception Systems in Self-driving |               | UATC, LLC              |
| US      | 17/528,559         | 11/17/2021  | Automatic Annotation of Object Trajectories in Multiple Dimensions                  |               | UATC, LLC              |
| US      | 63/114,785         | 11/17/2020  | Auto4D: Learning to Label 4D Objects from Sequential Point Clouds                   |               | UATC, LLC              |
| US      | 15/379,407         | 12/14/2016  | Vehicle Management System   | 9,811,086     | UATC, LLC              |
| US      | 15/379,420         | 12/14/2016  | Vehicle Management System   | 10,395,441    | UATC, LLC              |
| US      | 15/730,211         | 10/11/2017  | Vehicle Management System   | 10,424,135    | UATC, LLC              |
| US      | 15/730,234         | 10/11/2017  | VEHICLE MANAGEMENT SYSTEM   | 10,249,110    | UATC, LLC              |
| US      | 16/554,711         | 8/29/2019   | Vehicle Management System   | 11,062,535    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 17/373,197         | 7/12/2021   | Vehicle Management System  | 11,847,870    | UATC, LLC              |
| US      | 18/496,307         | 10/27/2023  | Vehicle Management System  |               | UATC, LLC              |
| US      | 63/114,842         | 11/17/2020  | S3: Neural Shape, Skeleton, and Skinning Fields for 3D Human Modeling                                      |               | UATC, LLC              |
| US      | 63/114,799         | 11/17/2020  | Secrets of 3D Implicit Object Shape Reconstruction in the Wild   |               | UATC, LLC              |
| US      | 17/528,277         | 11/17/2021  | Systems and Methods for Simulating Traffic Scenes  | 11,580,851    | UATC, LLC              |
| US      | 18/168,093         | 2/13/2023   | Systems and Methods for Simulating Traffic Scenes  |               | UATC, LLC              |
| US      | 63/114,848         | 11/17/2020  | SceneGen: Learning to Simulate Realistic Traffic Scenes  |               | UATC, LLC              |
| US      | 17/528,567         | 11/17/2021  | Systems and Methods for Video Object Segmentation  | 11,562,490    | UATC, LLC              |
| US      | 63/114,811         | 11/17/2020  | VideoClick: Video Object Segmentation with a Single Click  |               | UATC, LLC              |
| US      | 17/528,661         | 11/17/2021  | Systems and Methods for Actor Motion Forecasting within a Surrounding Environment of an Autonomous Vehicle | 11,731,663    | UATC, LLC              |
| US      | 18/346,518         | 7/3/2023    | Systems and Methods for Actor Motion Forecasting within a Surrounding Environment of an Autonomous Vehicle |               | UATC, LLC              |
| US      | 63/114,855         | 11/17/2020  | LaneRCNN: Distributed Representations for Graph-Centric Motion Forecasting                                 |               | UATC, LLC              |
| US      | 63/114,788         | 11/17/2020  | MP3: A Unified Model to Map, Perceive, Predict and Plan  |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 63/114,875         | 11/17/2020  | PLUME: Efficient 3D Object Detection from Stereo Images   |               | UATC, LLC              |
| US      | 63/114,789         | 11/17/2020  | Deep Multi-Task Learning for Joint Localization, Perception, and Prediction                                   |               | UATC, LLC              |
| US      | 15/337,383         | 10/28/2016  | Vehicle Security System   | 10,243,867    | UATC, LLC              |
| US      | 16/363,366         | 3/25/2019   | Vehicle Security System   | 10,659,382    | UATC, LLC              |
| US      | 11/351,248         | 2/9/2006    | METHOD AND APPARATUS FOR DISPLAYING A 2D IMAGE DATA SET COMBINED WITH A 3D RANGEFINDER DATA SET               | 7477360       | UATC, LLC              |
| US      | 11/351,245         | 2/9/2006    | METHOD AND APPARATUS FOR DISPLAYING A CALCULATED GEOMETRIC ENTITY WITHIN ONE OR MORE 3D RANGEFINDER DATA SETS | 7,974,461     | UATC, LLC              |
| US      | 13/175,622         | 7/1/2011    | METHOD AND APPARATUS FOR DISPLAYING A CALCULATED GEOMETRIC ENTITY WITHIN ONE OR MORE 3D RANGEFINDER DATA SETS | 8,879,825     | UATC, LLC              |
| US      | 11/351,246         | 2/9/2006    | METHOD AND APPARATUS FOR MAKING AND DISPLAYING MEASUREMENTS BASED UPON MULTIPLE 3D RANGEFINDER DATA SETS      | 7477359       | UATC, LLC              |



| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 11/351,235         | 2/9/2006    | METHOD AND APPARATUS FOR DETERMINING THE GEOMETRIC CORRESPONDENCE BETWEEN MULTIPLE 3D RANGEFINDER DATA SETS | 7,403,268     | UATC, LLC              |
| US      | 11/351,234         | 2/9/2006    | METHOD AND APPARATUS FOR SPECIFYING AND DISPLAYING MEASUREMENTS WITHIN A 3D RANGEFINDER DATA SET            | 7,777,761     | UATC, LLC              |
| US      | 60/652,208         | 2/11/2005   | Methods and systems for acquisition, registration, display and measurement using rangefinder scans          |               | UATC, LLC              |
| US      | 11/523,292         | 9/19/2006   | METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR ACQUIRING THREE-DIMENSIONAL RANGE INFORMATION           | 7,551,771     | UATC, LLC              |
| US      | 60/718,646         | 9/20/2005   | Scanning 3D laser rangefinder apparatus   |               | UATC, LLC              |
| US      | 60/721,328         | 9/28/2005   | Range camera apparatus  |               | UATC, LLC              |
| US      | 12/390,960         | 2/23/2009   | METHOD AND SYSTEM FOR MONITORING A MOBILE EQUIPMENT FLEET   | 8,065,342     | UATC, LLC              |
| US      | 13/253,599         | 10/5/2011   | METHOD AND SYSTEM FOR MONITORING A MOBILE EQUIPMENT FLEET   | 8,244,779     | UATC, LLC              |
| US      | 61/030,636         | 2/22/2008   | METHOD AND SYSTEM FOR MONITORING A MOBILE EQUIPMENT FLEET   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 11/037,620         | 1/18/2005   | Portable Memory Automobile Ignition System  | 7,006,914     | UATC, LLC              |
| US      | 11/493,736         | 7/26/2006   | Method for Managing a Transportation Fleet  | 7,430,470     | UATC, LLC              |
| US      | 11/236,167         | 9/27/2005   | Portable Memory Automobile Ignition System  | 7,233,857     | UATC, LLC              |
| US      | 12/111,386         | 4/29/2008   | Portable Memory Automobile Ignition System  | 7,912,625     | UATC, LLC              |
| US      | 11/757,113         | 6/1/2007    | Automotive Brake Lighting   | 7,755,474     | UATC, LLC              |
| US      | 12/793,483         | 6/3/2010    | Automotive Brake Lighting   | 7,982,594     | UATC, LLC              |
| US      | 12/793,509         | 6/3/2010    | Automotive Brake Lighting   |               | UATC, LLC              |
| US      | 09/865,070         | 5/24/2001   | Optical Highway Line Detector   | 6,498,570     | UATC, LLC              |
| US      | 10/328,815         | 12/24/2002  | Infrared Road Line Detector   | 6,741,186     | UATC, LLC              |
| US      | 10/107,006         | 3/25/2002   | On-Board Vehicle System and Method for Receiving and Indicating Driving-Related Signals   | 6,850,170     | UATC, LLC              |
| US      | 11/813,235         | 12/31/2005  | Apparatus and Method for Warning and Prevention of Vehicle Collisions   | 7,705,748     | UATC, LLC              |
| US      | 13/024,466         | 2/10/2011   | Methods, Systems, and Computer Program Products for Managing Operation of an Automotive Vehicle                                 | 8,773,251     | UATC, LLC              |
| US      | 15/393,306         | 12/29/2016  | Image Capture Device with Customizable Regions of Interest  | 10,452,926    | UATC, LLC              |
| US      | 13/025,939         | 2/11/2011   | Methods, Systems, and Computer Program Products for Providing Steering-Control Feedback to an Operator of an Automotive Vehicle | 8,666,603     | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 14/195,820         | 3/3/2014    | METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR PROVIDING STEERING-CONTROL FEEDBACK TO AN OPERATOR OF AN AUTOMOTIVE VEHICLE |               | UATC, LLC              |
| US      | 16/774,566         | 1/28/2020   | SCAFFOLDS FOR GLOBALLY CONSISTENT MAPS  | 11,435,194    | UATC, LLC              |
| US      | 62/797,693         | 1/28/2019   | SCAFFOLDS FOR GLOBALLY CONSISTENT MAPS  |               | UATC, LLC              |
| US      | 15/182,989         | 6/15/2016   | METHOD FOR MAINTAINING ACTIVE CONTROL OF AN AUTONOMOUS VEHICLE  | 9,582,003     | UATC, LLC              |
| US      | 15/409,160         | 1/18/2017   | METHOD FOR MAINTAINING ACTIVE CONTROL OF AN AUTONOMOUS VEHICLE  | 10,053,111    | UATC, LLC              |
| US      | 62/337,294         | 5/16/2016   | METHOD FOR MAINTAINING ACTIVE CONTROL OF AN AUTONOMOUS VEHICLE  |               | UATC, LLC              |
| US      | 14/777,427         | 3/14/2014   | METHODS, SYSTEMS, AND APPARATUS FOR MULTI-SENSORY STEREO VISION FOR ROBOTICS  | 10,412,368    | UATC, LLC              |
| US      | 14/962,847         | 12/8/2015   | OPTIMIZING COMMUNICATION FOR AUTOMATED VEHICLES   | 9,603,158     | UATC, LLC              |
| US      | 14/962,876         | 12/8/2015   | AUTONOMOUS VEHICLE MESH NETWORKING CONFIGURATION  | 10,243,604    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 14/962,918         | 12/8/2015   | COMMUNICATION CONFIGURATION SYSTEM FOR A FLEET OF AUTOMATED VEHICLES | 9,432,929     | UATC, LLC              |
| US      | 15/219,992         | 7/26/2016   | AUTONOMOUS VEHICLE COMMUNICATION CONFIGURATION SYSTEM                | 9,740,205     | UATC, LLC              |
| US      | 15/617,213         | 6/8/2017    | AUTONOMOUS VEHICLE COMMUNICATION CONFIGURATION SYSTEM                | 10,234,863    | UATC, LLC              |
| US      | 16/238,288         | 1/2/2019    | COMMUNICATION SYSTEM FOR AN AUTONOMOUS VEHICLE                       |               | UATC, LLC              |
| US      | 14/962,974         | 12/8/2015   | BACKEND SYSTEM FOR ROUTE PLANNING OF AUTONOMOUS VEHICLES             | 9,557,183     | UATC, LLC              |
| US      | 14/963,007         | 12/8/2015   | AUTOMATED VEHICLE COMMUNICATIONS SYSTEM                              | 10,036,642    | UATC, LLC              |
| US      | 14/963,038         | 12/8/2015   | BACKEND COMMUNICATIONS SYSTEM FOR A FLEET OF AUTONOMOUS VEHICLES     | 10,050,760    | UATC, LLC              |
| US      | 15/420,932         | 1/31/2017   | OPTIMIZING COMMUNICATION FOR AUTONOMOUS VEHICLES                     | 10,021,614    | UATC, LLC              |
| US      | 15/138,935         | 4/26/2016   | ROAD REGISTRATION DIFFERENTIAL GPS                                   | 10,459,087    | UATC, LLC              |
| US      | 16/532,789         | 8/6/2019    | SATELLITE SIGNAL CALIBRATION SYSTEM                                  | 11,487,020    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/176,561         | 6/8/2016    | DISPARITY MAPPING FOR AN AUTONOMOUS VEHICLE  |               | UATC, LLC              |
| US      | 15/610,068         | 5/31/2017   | TRAVEL TIME ESTIMATION   | 10,810,883    | UATC, LLC              |
| US      | 17/022,565         | 9/16/2020   | COMPUTING SYSTEM IMPLEMENTING TRAFFIC MODELING USING SENSOR VIEW DATA FROM SELF-DRIVING VEHICLES |               | UATC, LLC              |
| US      | 62/345,289         | 6/3/2016    | TRAVEL TIME ESTIMATION   |               | UATC, LLC              |
| US      | 15/412,303         | 1/23/2017   | DYNAMIC ROUTING FOR SELF-DRIVING VEHICLES  | 10,254,121    | UATC, LLC              |
| US      | 16/274,040         | 2/12/2019   | DYNAMIC ROUTING FOR SELF-DRIVING VEHICLES  | 11,231,286    | UATC, LLC              |
| US      | 15/850,452         | 12/21/2017  | Color Filter Array for Image Capture Device  |               | UATC, LLC              |
| US      | 62/439,910         | 12/29/2016  | Color Filter Array for Image Capture Device  |               | UATC, LLC              |
| US      | 15/450,268         | 3/6/2017    | HYBRID TRIP PLANNING FOR AUTONOMOUS VEHICLES   | 10,438,493    | UATC, LLC              |
| US      | 16/437,881         | 6/11/2019   | HYBRID TRIP PLANNING FOR AUTONOMOUS VEHICLES   | 10,586,458    | UATC, LLC              |
| US      | 62/379,162         | 8/24/2016   | HYBRID AUTONOMY ROUTING  |               | UATC, LLC              |
| US      | 16/268,337         | 2/5/2019    | MULTIMODAL CONTROL SYSTEM FOR SELF DRIVING VEHICLE   |               | UATC, LLC              |
| US      | 62/786,707         | 12/31/2018  | MULTIMODAL CONTROL SYSTEM FOR SELF DRIVING VEHICLE   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/783,391         | 10/13/2017  | NAVIGATIONAL CONSTRAINTS FOR AUTONOMOUS VEHICLES   | 10,942,525    | UATC, LLC              |
| US      | 17/144,431         | 1/8/2021    | NAVIGATIONAL CONSTRAINTS FOR AUTONOMOUS VEHICLES   |               | UATC, LLC              |
| US      | 62/503,798         | 5/9/2017    | NAVIGATIONAL CONSTRAINTS FOR AUTONOMOUS VEHICLES   |               | UATC, LLC              |
| US      | 15/973,720         | 5/8/2018    | COVERAGE PLAN GENERATION AND IMPLEMENTATION  |               | UATC, LLC              |
| US      | 62/503,790         | 5/9/2017    | COVERAGE PLAN GENERATION AND IMPLEMENTATION  |               | UATC, LLC              |
| US      | 15/959,100         | 4/20/2018   | PREDICTIVE TELEASSISTANCE SYSTEM FOR AUTONOMOUS VEHICLES                                     |               | UATC, LLC              |
| US      | 62/479,465         | 3/31/2017   | PREDICTIVE TELEASSISTANCE SYSTEM FOR AUTONOMOUS VEHICLES                                     |               | UATC, LLC              |
| US      | 15/427,967         | 2/8/2017    | AUTONOMOUS VEHICLE CONTROL SYSTEM IMPLEMENTING TELEASSISTANCE                                |               | UATC, LLC              |
| US      | 15/604,979         | 5/25/2017   | DEPLOYING HUMAN-DRIVEN VEHICLES FOR AUTONOMOUS VEHICLE ROUTING AND LOCALIZATION MAP UPDATING | 10,186,156    | UATC, LLC              |
| US      | 15/812,501         | 11/14/2017  | DYNAMIC VEHICLE ROUTING USING ANNOTATED MAPS AND PROFILES                                    |               | UATC, LLC              |
| US      | 15/799,469         | 10/31/2017  | Customizable Vehicle Security System   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/812,606         | 11/14/2017  | AUTONOMOUS VEHICLE ROUTING USING ANNOTATED MAPS        | 10,416,677    | UATC, LLC              |
| US      | 16/519,415         | 7/23/2019   | AUTONOMOUS VEHICLE ROUTING USING ANNOTATED MAPS        | 11,157,008    | UATC, LLC              |
| US      | 16/140,897         | 9/25/2018   | IMU DATA OFFSET COMPENSATION FOR AN AUTONOMOUS VEHICLE | 10,989,538    | UATC, LLC              |
| US      | 17/235,365         | 4/20/2021   | IMU DATA OFFSET COMPENSATION FOR AN AUTONOMOUS VEHICLE | 11,536,569    | UATC, LLC              |
| US      | 62/599,220         | 12/15/2017  | IMU DATA OFFSET COMPENSATION FOR AN AUTONOMOUS VEHICLE |               | UATC, LLC              |
| US      | 16/181,718         | 11/6/2018   | ROAD ANOMALY DETECTION FOR AUTONOMOUS VEHICLE          | 10,967,862    | UATC, LLC              |
| US      | 17/149,337         | 1/14/2021   | ROAD ANOMALY DETECTION FOR AUTONOMOUS VEHICLE          | 11,731,627    | UATC, LLC              |
| US      | 62/582,503         | 11/7/2017   | ROAD ANOMALY DETECTION FOR AUTONOMOUS VEHICLES         |               | UATC, LLC              |
| US      | 16/434,501         | 6/7/2019    | NAVIGATIONAL CONSTRAINTS FOR AUTONOMOUS VEHICLES       | 11,287,816    | UATC, LLC              |
| US      | 62/683,191         | 6/11/2018   | NAVIGATIONAL CONSTRAINTS FOR AUTONOMOUS VEHICLES       |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 16/828,632         | 3/24/2020   | COMPUTER SYSTEM FOR UTILIZING ULTRASONIC SIGNALS TO IMPLEMENT OPERATIONS FOR AUTONOMOUS VEHICLES     | 11,830,302    | UATC, LLC              |
| US      | 15/688,704         | 8/28/2017   | Systems and Methods to Track Vehicles Proximate Perceived by an Autonomous Vehicle                   | 10,037,613    | UATC, LLC              |
| US      | 16/039,864         | 7/19/2018   | Systems and Methods to Track Vehicles Proximate Perceived By an Autonomous Vehicle                   | 10,229,510    | UATC, LLC              |
| US      | 62/478,663         | 3/30/2017   | Systems and Methods to Track Vehicles Proximate to an Autonomous Vehicle                             |               | UATC, LLC              |
| US      | 15/434,179         | 2/16/2017   | Prediction of Future Locations of Objects Proximate to Autonomous Vehicles Based on Nominal Pathways |               | UATC, LLC              |
| US      | 15/423,215         | 2/2/2017    | Machine-Learning Based Vehicle Motion Control System   | 10,730,531    | UATC, LLC              |
| US      | 15/385,613         | 12/20/2016  | VEHICLE CONTROLS BASED ON THE MEASURED WEIGHT OF FREIGHT   | 10,118,627    | UATC, LLC              |
| US      | 16/051,659         | 8/1/2018    | VEHICLE CONTROLS BASED ON THE MEASURED WEIGHT OF FREIGHT   | 10,279,815    | UATC, LLC              |
| US      | 15/423,233         | 2/2/2017    | Adaptive Vehicle Motion Control System   | 9,964,952     | UATC, LLC              |
| US      | 15/963,662         | 4/26/2018   | Adaptive Vehicle Motion Control System   | 11,036,233    | UATC, LLC              |
| US      | 17/344,507         | 6/10/2021   | Adaptive Vehicle Motion Control System   |               | UATC, LLC              |
| US      | 17/344,504         | 6/10/2021   | Adaptive Vehicle Motion Control System   |               | UATC, LLC              |
| US      | 15/440,510         | 2/23/2017   | Vehicle Control System   | 10,220,857    | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 16/267,468         | 2/5/2019    | Vehicle Control System   | 11,104,352    | UATC, LLC              |
| US      | 17/407,750         | 8/20/2021   | Vehicle Control System   | 11,801,851    | UATC, LLC              |
| US      | 18/474,972         | 9/26/2023   | Vehicle Control System   |               | UATC, LLC              |
| US      | 62/482,424         | 4/6/2017    | MULTI-CHANNEL LIDAR SYSTEM   |               | UATC, LLC              |
| US      | 15/480,851         | 4/6/2017    | LIDAR DETECTION MECHANISM  |               | UATC, LLC              |
| US      | 15/631,990         | 6/23/2017   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLE                      | 10,007,269    | UATC, LLC              |
| US      | 15/987,460         | 5/23/2018   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                     | 10,649,464    | UATC, LLC              |
| US      | 16/871,631         | 5/11/2020   | COLLISION-AVOIDANCE SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES                     | 11,402,848    | UATC, LLC              |
| US      | 15/458,740         | 3/14/2017   | HIERARCHICAL MOTION PLANNING FOR AUTONOMOUS VEHICLES                           | 10,518,770    | UATC, LLC              |
| US      | 15/475,228         | 3/31/2017   | Machine-Learning Based Autonomous Vehicle Management System                    | 10,248,121    | UATC, LLC              |
| US      | 15/469,981         | 3/27/2017   | Machine Learning for Event Detection and Classification in Autonomous Vehicles | 10,520,947    | UATC, LLC              |
| US      | 15/467,504         | 3/23/2017   | Machine Learning for Triaging Failures in Autonomous Vehicles                  |               | UATC, LLC              |
| US      | 15/596,046         | 5/16/2017   | Self-Driving Delivery of Optionally-Driven Vehicles                            | 10,703,382    | UATC, LLC              |
| US      | 14/711,506         | 5/13/2015   | AUTONOMOUS VEHICLE OPERATED WITH GUIDE ASSISTANCE OF HUMAN DRIVEN VEHICLES     | 9,494,439     | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/264,374         | 9/13/2016   | AUTONOMOUS VEHICLE OPERATED WITH GUIDE ASSISTANCE OF HUMAN DRIVEN VEHICLES        | 9,933,779     | UATC, LLC              |
| US      | 15/349,793         | 11/11/2016  | AUTONOMOUS VEHICLE OPERATED WITH GUIDE ASSISTANCE OF HUMAN DRIVEN VEHICLES        | 10,126,742    | UATC, LLC              |
| US      | 16/159,283         | 10/12/2018  | AUTONOMOUS VEHICLE OPERATED WITH GUIDE ASSISTANCE OF HUMAN DRIVEN VEHICLES        | 10,990,094    | UATC, LLC              |
| US      | 15/607,994         | 5/30/2017   | Automatic Tuning of Autonomous Vehicle Cost Functions Based on Human Driving Data |               | UATC, LLC              |
| US      | 15/700,689         | 9/11/2017   | Automatic Tuning of Autonomous Vehicle Cost Functions Based on Human Driving Data | 10,168,705    | UATC, LLC              |
| US      | 62/482,280         | 4/6/2017    | Machine Learning to Automatically Tune Autonomous Vehicle Cost Function Gains     |               | UATC, LLC              |
| US      | 15/698,824         | 9/8/2017    | Image-Based Pedestrian Detection  | 10,108,867    | UATC, LLC              |
| US      | 16/154,348         | 10/8/2018   | Image-Based Pedestrian Detection  | 10,817,731    | UATC, LLC              |
| US      | 62/489,524         | 4/25/2017   | Image-Based Pedestrian Detection  |               | UATC, LLC              |
| US      | 15/496,144         | 4/25/2017   | FPGA Device for Image Classification  | 10,255,525    | UATC, LLC              |
| US      | 16/377,346         | 4/8/2019    | FPGA Device for Image Classification  | 10,860,896    | UATC, LLC              |
| US      | 15/477,638         | 4/3/2017    | Camera Fields of View for Object Detection  |               | UATC, LLC              |
| US      | 15/475,934         | 3/31/2017   | Autonomous Vehicle Sensor Calibration System                                      | 10,401,501    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/475,755         | 3/31/2017   | Autonomous Vehicle Paletization System  | 10,095,239    | UATC, LLC              |
| US      | 16/135,760         | 9/19/2018   | Autonomous Vehicle Paletization System  | 11,021,075    | UATC, LLC              |
| US      | 17/332,393         | 5/27/2021   | Autonomous Vehicle Paletization System  | 11,548,403    | UATC, LLC              |
| US      | 15/473,686         | 3/30/2017   | Systems and Methods to Control Autonomous Vehicle Motion  | 10,345,808    | UATC, LLC              |
| US      | 16/445,787         | 6/19/2019   | Systems and Methods to Control Autonomous Vehicle Motion  | 11,194,327    | UATC, LLC              |
| US      | 17/533,775         | 11/23/2021  | Systems and Methods to Control Autonomous Vehicle Motion  | 11899453      | UATC, LLC              |
| US      | 15/484,073         | 4/10/2017   | Lidar Display Systems and Methods   | 9,904,375     | UATC, LLC              |
| US      | 15/905,364         | 2/26/2018   | Lidar Display Systems and Methods   | 10,394,345    | UATC, LLC              |
| US      | 15/602,174         | 5/23/2017   | Autonomy Monitoring Systems and Methods for a Vehicle   |               | UATC, LLC              |
| US      | 62/487,735         | 4/20/2017   | Autonomy Monitoring Systems and Methods for a Vehicle   |               | UATC, LLC              |
| US      | 15/482,219         | 4/7/2017    | Autonomous Vehicle Sensor Cleaning System   | 10,857,980    | UATC, LLC              |
| US      | 15/482,251         | 4/7/2017    | Autonomous Vehicle Sensor Cleaning System   | 10,518,754    | UATC, LLC              |
| US      | 16/723,124         | 12/20/2019  | Autonomous Vehicle Sensor Cleaning System   |               | UATC, LLC              |
| US      | 17/825,014         | 5/26/2022   | Autonomous Vehicle Sensor Cleaning System   | 11,801,808    | UATC, LLC              |
| US      | 18/473,779         | 9/25/2023   | Autonomous Vehicle Sensor Cleaning System   |               | UATC, LLC              |
| US      | 17/022,923         | 9/16/2020   | Systems and Methods for Jointly Performing Perception, Perception, and Motion Planning for an Autonomous System |               | UATC, LLC              |
| US      | 62/936,415         | 11/16/2019  | DSDNet: End-to-End Deep Structured Self-Driving Network   |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 63/033,361         | 6/2/2020    | System and Methods for Jointly Performing Perception, Perception, and Motion Planning for an Autonomous System |               | UATC, LLC              |
| US      | 62/579,528         | 10/31/2017  | Hybrid-View Lidar-Based Object Detection   |               | UATC, LLC              |
| US      | 15/609,141         | 5/31/2017   | Top-View Lidar-Based Object Detection  |               | UATC, LLC              |
| US      | 15/907,966         | 2/28/2018   | Hybrid-View LIDAR-Based Object Detection   | 10,809,361    | UATC, LLC              |
| US      | 17/067,135         | 10/9/2020   | Hybrid-View LIDAR-Based Object Detection   | 11,885,910    | UATC, LLC              |
| US      | 15/609,256         | 5/31/2017   | Range-View Lidar-Based Object Detection  | 10,310,087    | UATC, LLC              |
| US      | 15/602,197         | 5/23/2017   | PATH SEGMENT RISK REGRESSION SYSTEM FOR ON-DEMAND TRANSPORTATION SERVICES                                      | 10,489,721    | UATC, LLC              |
| US      | 15/602,327         | 5/23/2017   | GENERALIZED RISK ROUTING FOR HUMAN DRIVERS   | 11,288,612    | UATC, LLC              |
| US      | 15/602,375         | 5/23/2017   | INDIVIDUALIZED RISK ROUTING FOR HUMAN DRIVERS  | 10,697,789    | UATC, LLC              |
| US      | 15/602,387         | 5/23/2017   | NON-TRIP RISK MATCHING AND ROUTING FOR ON-DEMAND TRANSPORTATION SERVICES                                       | 11,080,806    | UATC, LLC              |
| US      | 15/602,398         | 5/23/2017   | FLEET UTILIZATION EFFICIENCY FOR ON-DEMAND TRANSPORTATION SERVICES   | 11,282,009    | UATC, LLC              |
| US      | 17/678,195         | 2/23/2022   | FLEET UTILIZATION EFFICIENCY FOR ON-DEMAND TRANSPORTATION SERVICES   | 11,887,032    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 18/543,579         | 12/18/2023  | FLEET UTILIZATION EFFICIENCY FOR ON-DEMAND TRANSPORTATION SERVICES           |               | UATC, LLC              |
| US      | 15/602,223         | 5/23/2017   | VEHICLE SELECTION FOR ON-DEMAND TRANSPORTATION SERVICES                      | 10,762,447    | UATC, LLC              |
| US      | 15/602,234         | 5/23/2017   | SOFTWARE VERSION AND MODE SWITCHING FOR AUTONOMOUS VEHICLES                  | 10,501,091    | UATC, LLC              |
| US      | 15/602,244         | 5/23/2017   | SOFTWARE VERSION VERIFICATION FOR AUTONOMOUS VEHICLES                        | 10,884,902    | UATC, LLC              |
| US      | 15/602,277         | 5/23/2017   | POST-TRIP OPTIMIZATION FOR AUTONOMOUS VEHICLES                               |               | UATC, LLC              |
| US      | 15/602,292         | 5/23/2017   | FRACTIONAL RISK PERFORMANCE EVALUATION FOR AUTONOMOUS VEHICLES               | 10,789,835    | UATC, LLC              |
| US      | 15/602,303         | 5/23/2017   | AUTONOMOUS VEHICLE DEGRADATION LEVEL MONITORING                              | 10,262,471    | UATC, LLC              |
| US      | 15/602,313         | 5/23/2017   | INDIVIDUALIZED RISK VEHICLE MATCHING FOR AN ON-DEMAND TRANSPORTATION SERVICE | 11,282,016    | UATC, LLC              |
| US      | 15/668,196         | 8/3/2017    | Multi-Model Switching on a Collision Mitigation System                       | 10,065,638    | UATC, LLC              |
| US      | 16/052,899         | 8/2/2018    | Multi-Model Switching on a Collision Mitigation System                       | 10,780,880    | UATC, LLC              |
| US      | 17/025,454         | 9/18/2020   | Multi-Model Switching on a Collision Mitigation System                       | 11,702,067    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 18/327,379         | 6/1/2023    | Multi-Model Switching on a Collision Mitigation System           |               | UATC, LLC              |
| US      | 15/637,539         | 6/29/2017   | Autonomous Vehicle Collision Mitigation Systems and Methods      | 10,386,856    | UATC, LLC              |
| US      | 16/429,437         | 6/3/2019    | Autonomous Vehicle Collision Mitigation Systems and Methods      | 11,048,272    | UATC, LLC              |
| US      | 17/360,599         | 6/28/2021   | Autonomous Vehicle Collision Mitigation Systems and Methods      | 11,789,461    | UATC, LLC              |
| US      | 18/464,822         | 9/11/2023   | Autonomous Vehicle Collision Mitigation Systems and Methods      |               | UATC, LLC              |
| US      | 15/933,730         | 3/23/2018   | Noise Testing in an Autonomous Vehicle                           | 10,382,862    | UATC, LLC              |
| US      | 62/519,924         | 6/15/2017   | Noise Testing in an Autonomous Vehicle                           |               | UATC, LLC              |
| US      | 15/980,669         | 5/15/2018   | LIDAR SENSOR ASSEMBLY INCLUDING DOVETAIL JOINT COUPLING FEATURES | 11,592,526    | UATC, LLC              |
| US      | 18/164,995         | 2/6/2023    | LIDAR Sensor Assembly Including Joint Coupling Features          |               | UATC, LLC              |
| US      | 15/472,076         | 3/28/2017   | ENCODED ROAD STRIPING FOR AUTONOMOUS VEHICLES                    | 10,754,348    | UATC, LLC              |
| US      | 15/679,319         | 8/17/2017   | CALIBRATION FOR AN AUTONOMOUS VEHICLE LIDAR MODULE               | 10,775,488    | UATC, LLC              |
| US      | 15/679,338         | 8/17/2017   | CALIBRATION FOR AN AUTONOMOUS VEHICLE LIDAR MODULE               | 10,746,858    | UATC, LLC              |
| US      | 15/678,984         | 8/16/2017   | CONFIGURING MOTION PLANNING FOR A SELF-DRIVING TRACTOR UNIT      | 11,048,251    | UATC, LLC              |

| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 17/360,370         | 6/28/2021   | CONFIGURING MOTION PLANNING FOR A SELF-DRIVING TRACTOR UNIT  | 11,385,644    | UATC, LLC              |
| US      | 17/836,110         | 6/9/2022    | CONFIGURING MOTION PLANNING FOR A SELF-DRIVING TRACTOR UNIT  | 11,669,091    | UATC, LLC              |
| US      | 15/151,394         | 5/10/2016   | CONTROL SYSTEM TO ADJUST OPERATION OF AN AUTONOMOUS VEHICLE BASED ON A PROBABILITY OF INTERFERENCE BY A DYNAMIC OBJECT |               | UATC, LLC              |
| US      | 15/790,329         | 10/23/2017  | CARGO TRAILER SENSOR ASSEMBLY  | 11,052,913    | UATC, LLC              |
| US      | 17/365,453         | 7/1/2021    | Cargo Trailer Sensor Assembly  | 11,702,076    | UATC, LLC              |
| US      | 15/847,476         | 12/19/2017  | SYSTEM AND METHOD FOR PRESENTING AUTONOMY-SWITCHING DIRECTIONS   | 10,845,209    | UATC, LLC              |
| US      | 17/070,213         | 10/14/2020  | SYSTEM AND METHOD FOR PRESENTING AUTONOMY-SWITCHING DIRECTIONS   | 11,592,312    | UATC, LLC              |
| US      | 18/161,500         | 1/30/2023   | SYSTEM AND METHOD FOR PRESENTING AUTONOMY-SWITCHING DIRECTIONS   |               | UATC, LLC              |
| US      | 15/625,255         | 6/16/2017   | Systems and Methods to Obtain Feedback in Response to Autonomous Vehicle Failure Events                                | 10,559,140    | UATC, LLC              |
| US      | 16/741,282         | 1/13/2020   | Systems and Methods to Obtain Feedback in Response to Autonomous Vehicle Failure Events                                | 11,568,689    | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 18/154,130         | 1/13/2023   | Systems and Methods to Obtain Feedback in Response to Autonomous Vehicle Failure Events | 11900738      | UATC, LLC              |
| US      | 18/403,415         | 1/3/2024    | Systems and Methods to Obtain Feedback in Response to Autonomous Vehicle Failure Events |               | UATC, LLC              |
| US      | 15/730,177         | 10/11/2017  | Systems and Methods for Controlling an Input Device of an Autonomous Vehicle            | 10,843,722    | UATC, LLC              |
| US      | 62/520,639         | 6/16/2017   | Systems and Methods for Controlling an Input Device of an Autonomous Vehicle            |               | UATC, LLC              |
| US      | 15/652,654         | 7/18/2017   | Systems and Methods for Speed Limit Context Awareness                                   | 10,496,099    | UATC, LLC              |
| US      | 15/816,242         | 11/17/2017  | Turn Based Autonomous Vehicle Guidance  |               | UATC, LLC              |
| US      | 62/571,418         | 10/12/2017  | Turn Based Autonomous Vehicle Guidance  |               | UATC, LLC              |
| US      | 16/032,638         | 7/11/2018   | Vehicle Door Strike Prevention for Autonomous Vehicles                                  |               | UATC, LLC              |
| US      | 62/531,508         | 7/12/2017   | Vehicle Door Strike Prevention for Autonomous Vehicles                                  |               | UATC, LLC              |
| US      | 15/705,507         | 9/15/2017   | Context-Specific Tolerance for Motion Control in Autonomous Vehicles                    | 10,452,070    | UATC, LLC              |
| US      | 16/553,929         | 8/28/2019   | Context-Specific Tolerance for Motion Control in Autonomous Vehicles                    | 10,571,922    | UATC, LLC              |
| US      | 15/697,368         | 9/6/2017    | Control Method for Autonomous Vehicles  | 10,571,916    | UATC, LLC              |
| US      | 62/532,494         | 7/14/2017   | Control Method for Autonomous Vehicles  |               | UATC, LLC              |



| Country | Application Number | Filing Date | Title  | Patent Number | Current owner/assignor |
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| US      | 15/252,152         | 8/30/2016   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES   | 10,099,705    | UATC, LLC              |
| US      | 62/212,577         | 8/31/2015   | CONTROL SYSTEM FOR AUTONOMOUS-CAPABLE VEHICLES   |               | UATC, LLC              |
| US      | 29/614,834         | 8/23/2017   | Lidar Sensor   | D849,573      | UATC, LLC              |
| US      | 29/692,678         | 5/28/2019   | Lidar Sensor   | D882,430      | UATC, LLC              |
| US      | 15/651,362         | 7/17/2017   | Systems and Methods for Deploying an Autonomous Vehicle to Oversee Autonomous Navigation   | 10,818,187    | UATC, LLC              |
| US      | 17/065,171         | 10/7/2020   | Systems and Methods for Directing Another Computing System to Aid in Autonomous Navigation |               | UATC, LLC              |
| US      | 15/643,598         | 7/7/2017    | Sequential Sensor Cleaning System for Autonomous Vehicle                                   | 10,173,646    | UATC, LLC              |
| US      | 15/647,866         | 7/12/2017   | Systems and Methods for Automated Testing of Autonomous Vehicles                           | 10,466,705    | UATC, LLC              |
| US      | 16/672,079         | 11/1/2019   | Systems and Methods for Automated Testing of Autonomous Vehicles                           | 11,269,334    | UATC, LLC              |
| US      | 17/672,796         | 2/16/2022   | Systems and Methods for Automated Testing of Autonomous Vehicles                           |               | UATC, LLC              |
| US      | 15/890,383         | 2/7/2018    | Systems and Methods For Deploying Warning Devices From an Autonomous Vehicle               | 11,366,476    | UATC, LLC              |
| US      | 17/843,278         | 6/17/2022   | Systems and Methods For Deploying Warning Devices From an Autonomous Vehicle               |               | UATC, LLC              |
| US      | 62/617,409         | 1/15/2018   | Systems and Methods For Deploying a Warning Device From an Autonomous Vehicle              |               | UATC, LLC              |

| Country | Application Number | Filing Date | Title   | Patent Number | Current owner/assignor |
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| US      | 15/638,739         | 6/30/2017   | Human Supervision of an Automated Driving System  | 10,156,849    | UATC, LLC              |
| US      | 16/202,488         | 11/28/2018  | Human Supervision of an Automated Driving System  | 10,915,106    | UATC, LLC              |
| US      | 17/157,288         | 1/25/2021   | Human Supervision of an Automated Driving System  | 11,543,825    | UATC, LLC              |
| US      | 15/650,004         | 7/14/2017   | Systems and Methods for Communicating Future Vehicle Actions to be Performed by an Autonomous Vehicle | 10,493,622    | UATC, LLC              |
| US      | 15/650,028         | 7/14/2017   | Systems and Methods for Communicating Autonomous Vehicle Confidence Levels                            | 10,614,715    | UATC, LLC              |
| US      | 15/791,606         | 10/24/2017  | Systems and Methods for Using a Linear Actuator in Track Testing                                      |               | UATC, LLC              |
| US      | 62/549,534         | 8/24/2017   | Systems and Methods for Using a Linear Actuator in Track Testing                                      |               | UATC, LLC              |
| US      | 15/689,196         | 8/29/2017   | Testing Environment for Autonomous Vehicles   | 10,656,052    | UATC, LLC              |
| US      | 15/602,204         | 5/23/2017   | TRIP CLASSIFICATION SYSTEM FOR ON-DEMAND TRANSPORTATION SERVICES                                      |               | UATC, LLC              |
| US      | 62/180,731         | 6/17/2015   | Human-sourced Image Background Removal on Mobile Devices  |               | UATC, LLC              |
| US      | 62/181,104         | 6/17/2015   | Human-sourced Image Background Removal on Mobile Devices  |               | UATC, LLC              |