

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT5392048

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THEODORE HARRIS	07/17/2017
CRAIG O'CONNELL	07/26/2017
TERRY ANGELOS	08/20/2017
TATIANA KOROLEVSKAYA	07/17/2017
YUE LI	07/17/2017
TODD SAWYER	08/02/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	VISA INTERNATIONAL SERVICE ASSOCIATION
<b>Street Address:</b>	P.O. BOX 8999
<b>City:</b>	SAN FRANCISCO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94128
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16311024
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(415)576-0300
<i>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.</i>	
<b>Phone:</b>	4155760200
<b>Email:</b>	mmoy@kilpatricktownsend.com
<b>Correspondent Name:</b>	KILPATRICK TOWNSEND STOCKTON LLP
<b>Address Line 1:</b>	TWO EMBARCADERO STREET, 19TH FLOOR
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<b>ATTORNEY DOCKET NUMBER:</b>	079900-1117707 (1899US02)
<b>NAME OF SUBMITTER:</b>	MARILYN MOY
<b>SIGNATURE:</b>	/Marilyn Moy/
<b>DATE SIGNED:</b>	02/25/2019
<b>Total Attachments: 9</b>	

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WHEN RECORDED RETURN TO:  
Kilpatrick Townsend & Stockton  
Two Embarcadero Center  
Eighth Floor  
San Francisco  
CA  
94111

PATENT APPLICATION  
Docket No.:  
1899WO01

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ASSIGNMENT

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I/We the undersigned, hereinafter collectively referred to as "Assignor", have made an invention entitled

MACHINE LEARNING AND PREDICTION USING GRAPH COMMUNITIES

Preferred embodiments of said invention are disclosed in a United States patent application which:



Was previously filed as PCT Application No. PCT/US2017/041537 (Docket No. 1899WO01) in a receiving office of the World Intellectual Property Organization (WIPO), on 11-Jul-2017.

(The attorneys of Kilpatrick Townsend & Stockton are hereby authorized to insert the serial number and filing date when known)

The Assignee, Visa International Service Association  
a corporation of the State of Delaware  
having a principal place of business at  
P.O. Box 8999, San Francisco, CA, 94128, United States of America

desires to secure the entire right, title and interest in said invention and the patent application filed thereon.

For good and valuable consideration, the sufficiency of which is acknowledged, I hereby assign and transfer and/or have assigned and transferred to Assignee:

my entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom and the right to claim priority to the Application, all inventions or discoveries therein disclosed, and any and all Letters Patent of the United States, European Patent Office and of all other countries, which may be granted for such inventions or discoveries, or any of them, all such inventions or discoveries and all rights in such Application including any and all provisionals, substitutions, divisions, and continuations thereof, and to all Letters Patent that may be granted for said inventions and discoveries, and in and to all extensions, supplementary protection certificates, reexaminations, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I shall execute all papers necessary in connection with the Application in the United States Patent and Trademark Office, European Patent Office, any other patent offices, and under the Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, any reexamination of any of such applications, and any patent term extensions or supplementary protection certificates of any such applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient. I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.

I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith. I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 1 Name:

Theodore Harris

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

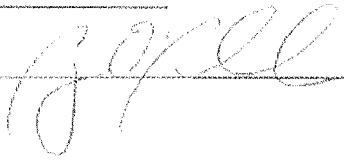
7/17/17

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 2 Name

Craig O'Connell

Inventor's signature:




Date:

7-26-17

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 3 Name

Terry Angelos

Inventor's signature:  Date: 8/20/17

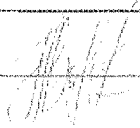


This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 4 Name

Tatiana Korolevskaya

Inventor's signature: \_\_\_\_\_



Date: \_\_\_\_\_

7/14/2012

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 5 Name

Yue Li

Inventor's signature: Yue Li Date: 07/17/2017

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Inventor 6 Name:

Todd Sawyer

Inventor's signature:



Date:

8/2/2017