

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5387141

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
DEBADEEPTA DEY	01/22/2019
HANZHANG HU	01/23/2019
RICHARD A. CARUANA	01/23/2019
JOHN C. LANGFORD	01/25/2019
ERIC J. HORVITZ	02/20/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICROSOFT TECHNOLOGY LICENSING, LLC
<b>Street Address:</b>	ONE MICROSOFT WAY
<b>City:</b>	REDMOND
<b>State/Country:</b>	WASHINGTON
<b>Postal Code:</b>	98052
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16213470
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(509)252-5002
<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>	425-538-9035
<b>Email:</b>	usdoCKET@microsoft.com
<b>Correspondent Name:</b>	MICROSOFT CORPORATION
<b>Address Line 1:</b>	ONE MICROSOFT WAY
<b>Address Line 4:</b>	REDMOND, WASHINGTON 98052
<b>ATTORNEY DOCKET NUMBER:</b>	405549-US-NP
<b>NAME OF SUBMITTER:</b>	ALEX LEA
<b>SIGNATURE:</b>	/alex lea/
<b>DATE SIGNED:</b>	02/21/2019
<b>Total Attachments: 9</b>	
source=405549-US-NP_Assignment_DEY#page1.tif	

source=405549-US-NP\_Assignment\_DEY#page2.tif  
source=405549-US-NP\_Assignment\_HU#page1.tif  
source=405549-US-NP\_Assignment\_HU#page2.tif  
source=405549-US-NP\_Assignment\_CARUANA#page1.tif  
source=405549-US-NP\_Assignment\_CARUANA#page2.tif  
source=405549-US-NP\_Assignment\_LANGFORD#page1.tif  
source=405549-US-NP\_Assignment\_HORVITZ#page1.tif  
source=405549-US-NP\_Assignment\_HORVITZ#page2.tif

I Debadeepta DEY ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "AUTOMATED GENERATION OF MACHINE LEARNING MODELS" ("APPLICATION"), which:

will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on \_\_\_\_\_ and given Application No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

was filed on December 7, 2018 and was given Application No 16/213,470 by the following Office "USPTO";

Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;


Application No.	Filing Date	Office

**PATENT ASSIGNMENT**

**MS Docket No.: 405549-US-NP**

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

	<u>01/22/2019</u>
Inventor's Signature	Date
Debadeepta DEY	
Printed Name in English	Printed Name in Native Language (if other than English)

I Hanzhang HU (“ASSIGNOR”) am the original inventor or an original joint inventor of subject matter (“INVENTION”) disclosed and/or claimed in a patent application entitled “AUTOMATED GENERATION OF MACHINE LEARNING MODELS” (“APPLICATION”), which:

- will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE’S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE’S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on \_\_\_\_\_ and given Application No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION’s Application No., filing date, and Office, when known;
- was filed on December 7, 2018 and was given Application No 16/213,470 by the following Office “USPTO”;


Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns (“ASSIGNEE”), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries (“APPLICATION DERIVATIVES”));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE’S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR’s entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries (“APPLICATION DERIVATIVES”));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

	2019 Jan 23rd
_____ Inventor’s Signature	_____ Date
Hanzhang HU	含章 胡
_____ Printed Name in English	_____ Printed Name in Native Language (if other than English)

I Richard A. CARUANA (“ASSIGNOR”) am the original inventor or an original joint inventor of subject matter (“INVENTION”) disclosed and/or claimed in a patent application entitled “AUTOMATED GENERATION OF MACHINE LEARNING MODELS” (“APPLICATION”), which:

- will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE’S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE’S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on \_\_\_\_\_ and given Application No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION’s Application No., filing date, and Office, when known;
- was filed on December 7, 2018 and was given Application No 16/213,470 by the following Office “USPTO”;

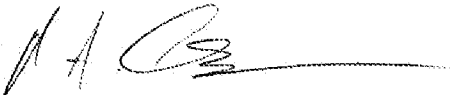
Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns (“ASSIGNEE”), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries (“APPLICATION DERIVATIVES”));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE’S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

	Jan 23, 2019
_____ Inventor's Signature	_____ Date
Richard A. CARUANA _____ Printed Name in English	_____ Printed Name in Native Language (if other than English)



I John C. LANGFORD ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "AUTOMATED GENERATION OF MACHINE LEARNING MODELS" ("APPLICATION"), which:

will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on [ ] and given Application No. [ ] by the following Office [ ]) this APPLICATION's Application No., filing date, and Office, when known;

was filed on 12/07/18 and was given Application No 16/213,470 by the following Office "USPTO";

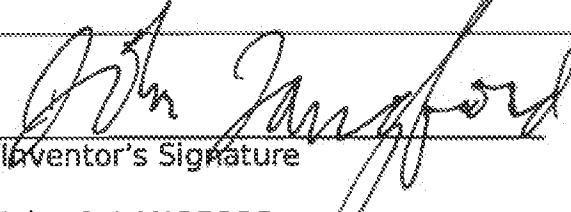
Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNEE, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive right, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

	1/25/19
Inventor's Signature	Date
John C. LANGFORD	Printed Name in Native Language (if other than English)
Printed Name in English	

I Eric I. HORVITZ ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "AUTOMATED GENERATION OF MACHINE LEARNING MODELS" ("APPLICATION"), which:

will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representative, Microsoft Technology Licensing, LLC., One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on \_\_\_\_\_ and given Application No. \_\_\_\_\_ by the following Office \_\_\_\_\_) this APPLICATION's Application No., filing date, and Office, when known;

was filed on December 7, 2018 and was given Application No 16/213,470 by the following Office "USPTO";

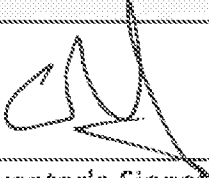
Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

	<u>2/20/19</u>
Inventor's Signature	Date
Eric J. HORVITZ	<u>ERIC HORVITZ</u>
Printed Name in English	Printed Name in Native Language (if other than English)