PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5387141

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
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

RECEIVING PARTY DATA

Name:	MICROSOFT TECHNOLOGY LICENSING, LLC
Street Address:	ONE MICROSOFT WAY
City:	REDMOND
State/Country:	WASHINGTON
Postal Code:	98052

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16213470

CORRESPONDENCE DATA

Fax Number: (509)252-5002

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: 425-538-9035

Email: usdocket@microsoft.com

Correspondent Name: MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

ATTORNEY DOCKET NUMBER:	405549-US-NP
NAME OF SUBMITTER:	ALEX LEA
SIGNATURE:	/alex lea/
DATE SIGNED:	02/21/2019

Total Attachments: 9

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PATENT REEL: 048402 FRAME: 0241

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PATENT REEL: 048402 FRAME: 0242

PATENT ASSIGNMENT MS Docket No.: 405549-US-NP

inventor of subject mat	ter ("INVENTION") discl	riginal inventor or an original joint osed and/or claimed in a patent OF MACHINE LEARNING MODELS'
ASSIGNEE'S LLC., One Mi LEGAL REPR on the following	egal representative, Mic crosoft Way, Redmond, W ESENTATIVES), to insert and given Appl ng Office	authorizes, and requests, crosoft Technology Licensing, Vashington 98052 (ASSIGNEE'S there in parentheses (filed lication No
	<u>December 7, 2018</u> and w by the following Office " <u>U</u>	
behalf of itself and its succ of acquiring, the entire as priority, in the INVENTION derived therefrom, such as	essors and assigns ("ASSI nd exclusive rights, title and the APPLICATION (ar s continuing applications	hington limited liability company, on GNEE"), is entitled to, and is desirous and interest, including the right of all other applications and patents, in whole or in part, in and for the es ("APPLICATION DERIVATIVES"));
· · · · · · · · · · · · · · · · · · ·	•	ASSIGNEE'S LEGAL REPRESENTATIVES ice into the following table for any
APPLICATION DERIVATIVES	after they are known;	
Application No.	Filing Date	Office

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).

D. A.	61 22 2019			
Inventor's Signature	Date / /			
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Printed Name in English	Printed Name in Native Language			
	(if other than English)			

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of subject ma	atter ("INVENTION")	R") am the original invedisclosed and/or claimed	ed in a patent app	olication entitled
	ASSIGNEE'S legal r LLC., One Microsof LEGAL REPRESENT on the following Of	ASSIGNOR hereby ausepresentative, Microsont Way, Redmond, Wash ATIVES), to insert he and given Applicate fice	oft Technology Lington 98052 (Asere in parentheseion No.	Licensing, SSIGNEE'S ses (filedby) this
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behalf of itse of acquiring, priority, in th derived there	If and its successors, the entire and exc ne INVENTION and the efrom, such as cont	ensing, LLC, a Washing and assigns ("ASSIGNE clusive rights, title and a le APPLICATION (and a linuing applications, in all foreign countries ("	EE"), is entitled to d interest, includ all other applicati whole or in par	, and is desirous ling the right of ons and patents t, in and for the
to insert the	•	zes, and requests, ASS lling date, and Office thev are known:		
Application		Filing Date	Office	

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lanzhong.Hu	
	2019 Jan 23rd
nventor's Signature	Date
	含章 胡
Hanzhang HU	
Printed Name in English	Printed Name in Native Language
	(if other than English)

PATENT ASSIGNMENT MS Docket No.: 405549-US-NP

I <u>Rich</u>	ard A. CARUANA ("A	SSIGNOR") am the origina	l inventor or an original joint
inventor of	subject matter ("	INVENTION") disclosed a	nd/or claimed in a patent
application	entitled "AUTOMAT	TED GENERATION OF MA	ACHINE LEARNING MODELS"
("APPLICATIO	ON"), which:		
	will be filed.	ASSIGNOR hereby autho	rizes, and requests.
		representative, Microsoft	
	3	t Way, Redmond, Washingt	37
		ATIVES), to insert here	
		and given Application	•
		olication No., filing date, ar	
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\boxtimes	was filed on Decem	<u>1ber 7, 2018</u> and was give	n Application No
		following Office " <u>USPTO</u> ";	n Application No
	10/213,470 by the	, following office object ,	
Micro	soft Technology Lice	ensing IIC a Washington	limited liability company, on
	- .	<u> </u>	is entitled to, and is desirous
		<u> </u>	terest, including the right of
		-	ther applications and patents
•			ole or in part, in and for the
			PLICATION DERIVATIVES"));
office state.	s, its territories, and	an foreign countries (Air	EICATION DERIVATIVES)),
ASSIC	NOR herehy authori	zes and requests ASSICN	EE'S LEGAL REPRESENTATIVES
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	N DERIVATIVES after		the following table for any
Application		Filing Date	Office
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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"));

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1102	Jan 23, 2019
Inventor's Signature	Date
Richard A. CARUANA	
Printed Name in English	Printed Name in Native Language
	(if other than English)

MS Docket No.: 405549-US-NP

	PATENT AS	SSIGNMENT	MS Docket	No.: <u>40554</u>	9-US-NP	
atter ("INVENTIO	N") disclosed	SSIGNOR") am the l and/or claimed in "APPLICATION"), w	a patent app			
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	led on <u>12/07/</u> " <u>USPTO</u> ";	and was	given Applica	ation No <u>16/</u>	<u>213,470</u> by the	e following
ccessors and as jhts, title and int iplications and partited States, its to ASSIGNOR I	signs ("ASSIC erest, includi stents derive erritories, and nereby autho	ensing, LLC, a Was SNEE"), is entitled ng the right of pri d therefrom, such d all foreign countr prizes, and reque Office into the follo	to, and is donity, in the II as continuing ies ("APPLICATES, ASSIGNE	esirous of a NVENTION a applications TION DERIVA	icquiring, the and the APPLIC s, in whole or i ATIVES")); REPRESENTA	entire and exclus 'ATION (and all oting 'ATION (and for the part, in and for the part) TIVES to insert to
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ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution e APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefro id for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

lbVentor's Sigrature

John C. LANGFORD

Printed Name in English

Printed Name in Native Language

(if other than English)

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I <u>Eric J. HORVITZ</u> ("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
	APPLICATION's Application No., filing date, and Office, when known;
900000	

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

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

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Inventor's Signature

Eric J. HORVITZ

Printed Name in English

= 120/19 10 ERK HORV:7

Date

Printed Name in Native Language

(if other than English)