

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

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5422335

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KINJAL BASU	01/16/2019
CHENGMING JIANG	01/16/2019
YUNBO OUYANG	01/16/2019
JOSH FLEMING	01/23/2019
<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>	16246403
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>Email:</b>	request@slwip.com
<b>Correspondent Name:</b>	SCHWEGMAN LUNDBERG & WOESSNER P.A.
<b>Address Line 1:</b>	P.O. BOX 2938
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402
<b>ATTORNEY DOCKET NUMBER:</b>	902399-US-NP 3080.K53US1
<b>NAME OF SUBMITTER:</b>	TAMERAE ROBINSON
<b>SIGNATURE:</b>	/Tamerae Robinson/
<b>DATE SIGNED:</b>	03/14/2019
<b>Total Attachments: 9</b>	
source=3080K53US1_Assignment#page1.tif	
source=3080K53US1_Assignment#page2.tif	
source=3080K53US1_Assignment#page3.tif	
source=3080K53US1_Assignment#page4.tif	

source=3080K53US1\_Assignment#page5.tif  
source=3080K53US1\_Assignment#page6.tif  
source=3080K53US1\_Assignment#page7.tif  
source=3080K53US1\_Assignment#page8.tif  
source=3080K53US1\_Assignment#page9.tif

RECORDATION FORM COVER SHEET  
PATENTS ONLY

Atty Ref/Docket No.: 902399-US-NP (3080.K53US1)

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Kinjal Basu, Chengming Jiang, Yunbo Ouyang,  
Josh Fleming

Additional name(s) of conveying party(ies) attached?

Yes  No

3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other

Execution Date: January 16, 2019, January 16, 2019,  
January 16, 2019, January 23, 2019

2. Name and address of receiving party(ies):

Name: Microsoft Technology Licensing, LLC

Street Address: One Microsoft Way

City: Redmond State: WA Zip: 98052  
Country: United States of America

Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

Serial No. 16/246,403

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Joshua E. Garfield

Address:

Schwegman Lundberg & Woessner, P.A.  
P.O. Box 2938  
Minneapolis, Minnesota 55402

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 0.00

Enclosed

Authorized to be charged to deposit account 19-0743

8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Joshua E. Garfield/Reg. No. 58,416

Name of Person Signing

/Joshua E. Garfield/

Signature

February 20, 2019

Date

Total number of pages including cover sheet: 9

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks  
Mail Stop Assignment Recordation Services  
P.O. Box 1450  
Alexandria, VA 22313-1450

PATENT  
REEL: 048601 FRAME: 0546

I Kinjal Basu ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LARGE-SCALE AUTOMATED HYPERPARAMETER TUNING", 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 January 11, 2019 and was given Application No 16/246,403 by the following Office "US Patent Office";

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).

<i>Kinjal Basu</i>	01/16/2019
_____ Inventor's Signature	_____ Date
Kinjal Basu	
_____ Printed Name in English	_____ Printed Name in Native Language (if other than English)

I Chengming Jiang ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LARGE-SCALE AUTOMATED HYPERPARAMETER TUNING", 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 January 11, 2019 and was given Application No 16/246,403 by the following Office "US Patent Office";

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>Chengming Jiang</u> Inventor's Signature	<u>01/16/2019</u> Date
<u>Chengming Jiang</u> Printed Name in English	<u>蒋呈明</u> Printed Name in Native Language (if other than English)

I Yunbo Ouyang ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LARGE-SCALE AUTOMATED HYPERPARAMETER TUNING", 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 January 11, 2019 and was given Application No 16/246,403 by the following Office "US Patent Office";

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"));


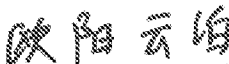
ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

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).

	01/16/2019
Inventor's Signature	Date
Yunbo Ouyang	
Printed Name in English	Printed Name in Native Language (if other than English)

I Josh Fleming ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LARGE-SCALE AUTOMATED HYPERPARAMETER TUNING", 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 January 11, 2019 and was given Application No 16/246,403 by the following Office "US Patent Office";


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>1/23/2019</u>
Inventor's Signature	Date
<u>Josh Fleming</u>	
Printed Name in English	Printed Name in Native Language (If other than English)