

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5980193

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JINGJING FU	09/01/2017
YAO ZHAI	09/04/2017
YAN LU	09/04/2017
<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>	98052-6399
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16641609
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(612)332-9081
<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>	6123325300
<b>Email:</b>	crogers@merchantgould.com
<b>Correspondent Name:</b>	MERCHANT & GOULD P.C.
<b>Address Line 1:</b>	P.O. BOX 2903
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402
<b>ATTORNEY DOCKET NUMBER:</b>	14917.3732USWO
<b>NAME OF SUBMITTER:</b>	DAVID D. HARRELL
<b>SIGNATURE:</b>	/David D. Harrell/
<b>DATE SIGNED:</b>	02/25/2020
<b>Total Attachments: 6</b>	
source=Assignment_14917_3732USWO#page1.tif	
source=Assignment_14917_3732USWO#page2.tif	
source=Assignment_14917_3732USWO#page3.tif	
source=Assignment_14917_3732USWO#page4.tif	

source=Assignment\_14917\_3732USWO#page5.tif

source=Assignment\_14917\_3732USWO#page6.tif

I Jingjing FU ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OBJECT DETECTION BASED ON DEEP NEURAL NETWORK" ("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 August 25, 2017 and was given Application No 201710744908.7 by the following Office "State Intellectual Property Office of the People's Republic of China (RO/CN) \_\_\_\_\_";

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
<sup>8</sup> 16/641609	2020-02-24	US Patent and Trademark Office

## PATENT ASSIGNMENT

MS Docket No.: 363339.01


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>2017, 08.01</u>
Inventor's Signature	Date
<u>Jingjing FU</u>	<u>伏晶晶</u>
Printed Name in English	Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT

MS Docket No.: 363339.01

I Yao ZHAI("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OBJECT DETECTION BASED ON DEEP NEURAL NETWORK" ("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 August 25, 2017 and was given Application No 201710744908.7 by the following Office "State Intellectual Property Office of the People's Republic of China (RO/CN) \_\_\_\_\_";

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
16/641609	2020-02-24	US Patent and Trademark Office

## PATENT ASSIGNMENT

MS Docket No.: 363339.01


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>Yao Zhai</u>	<u>2017/09/04</u>
Inventor's Signature	Date
<u>Yao ZHAI</u>	<u>翟耀</u>
Printed Name in English	Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT

MS Docket No.: 363339.01

I Yan LU ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "OBJECT DETECTION BASED ON DEEP NEURAL NETWORK" ("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 August 25, 2017 and was given Application No 201710744908.7 by the following Office "State Intellectual Property Office of the People's Republic of China  
(RO/CN) \_\_\_\_\_";

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;

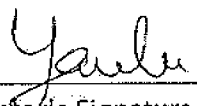
Application No.	Filing Date	Office
16/641609	2020-02-24	US Patent and Trademark Office

## PATENT ASSIGNMENT

MS Docket No.: 363339.01


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).

 _____ Inventor's Signature	<u>2017/09/04</u> _____ Date
<u>Yan LU</u> _____ Printed Name in English	<u>吕岩</u> _____ Printed Name in Native Language (if other than English)