

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
BIN GAO	10/13/2017
RUOFEI ZHANG	10/13/2017
MU-CHU LEE	10/13/2017
RECEIVING PARTY DATA	
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State/Country:	WASHINGTON
Postal Code:	98052
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15784057
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<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>	
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ATTORNEY DOCKET NUMBER:	403089-US-NP
NAME OF SUBMITTER:	DAVID HUNTLEY
SIGNATURE:	/ David Huntley 40309 /
DATE SIGNED:	10/13/2017
Total Attachments: 6	
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I Bin Gao ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Using a Generative Adversarial Network for Query-Keyword Matching" ("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 October 13, 2017 and given Application No. 15784057 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

was filed on _____ and was given Application No _____ by the following Office "_____";

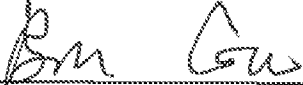
Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (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).

	10/13/2017
Inventor's Signature	Date
Bin GAO	高斌
Printed Name in English	Printed Name in Native Language (if other than English)

I Ruofei ZHANG ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Using a Generative Adversarial Network for Query-Keyword Matching" ("APPLICATION"), which:

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<u>Ruofei Zhang</u>	<u>10/13/2017</u>
Inventor's Signature	Date
<u>Ruofei ZHANG</u>	<u></u>
Printed Name in English	Printed Name in Native Language (if other than English)

I Mu-Chu LEE ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Using a Generative Adversarial Network for Query-Keyword Matching" ("APPLICATION"), which:

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 _____ Inventor's Signature	<u>13 Oct, 2017</u> _____ Date
<u>Mu-Chu LEE</u> _____ Printed Name in English	<u>李穆二</u> _____ Printed Name in Native Language (if other than English)