

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HONGLIANG FEI	07/26/2019
ZEYU DAI	07/26/2019
PING LI	07/26/2019
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16526614
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<b>ATTORNEY DOCKET NUMBER:</b>	28888-2339 (BN190626USN2)
<b>NAME OF SUBMITTER:</b>	ROMITA PIROYAN
<b>SIGNATURE:</b>	/Romita Piroyan/
<b>DATE SIGNED:</b>	08/22/2019
<b>Total Attachments: 3</b>	
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# ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the person(s) named below ("INVENTOR" whether singular or plural) has sold, assigned, transferred, and set over, and hereby sells, assigns, transfers, and sets over (to the extent not already done so) to:

## **Baidu USA LLC**

a limited liability corporation in California, having a place of business at 1195 Bordeaux Dr., Sunnyvale, CA 94089 ("ASSIGNEE"), for itself and its successors, assigns, transferees, and legal representatives the following:

- A. The entire worldwide right, title, and interest in and to all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following utility patent application (provisional or non-provisional application), design application, registered Community design, international application filed according to the Patent Cooperation Treaty (PCT), U.S. national phase application, or foreign application, entitled ("APPLICATION"):

### **COREFERENCE-AWARE REPRESENTATION LEARNING FOR NEURAL NAMED ENTITY RECOGNITION**

Patent Application No. 16/526,614, filed on July 30, 2019.

- B. The entire worldwide right, title, and interest in and to: (1) the APPLICATION; (2) all applications claiming priority to, or the benefit of, the APPLICATION whether directly or indirectly through a chain of priority or benefit; (3) all provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, international application, and all other patent applications that have been or may hereafter be filed in the United States or in any foreign countries having any of the SUBJECT MATTER; (4) all patents (including original patents, reissued patents, reexamination certificates, and extensions) that have been or may hereafter be granted on the applications set forth in (1), (2), and (3) (above); (5) all rights of priority or benefit in the APPLICATION and in any and all underlying provisional, nonprovisional, international, and foreign application(s); and (6) all causes of action, rights of enforcement, claims for damages, and all remedies arising out of any violation of any and all of the rights, titles, and interests assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages and all proceeds for past infringements before and after issuance.
- C. The entire worldwide right, title, and interest in and to any other related intellectual property rights such as, but not limited to, copyright rights, copyrightable subject matter, know how, trade secrets, designs and design rights, copyright registrations, reproduction rights, and INVENTOR waives any and all moral rights under 17 U.S.C. § 106A or otherwise, and consents to all acts or omissions by ASSIGNEE,

Title: COREREFERENCE-AWARE REPRESENTATION LEARNING FOR  
NEURAL NAMED ENTITY RECOGNITION  
Inventor(s): Fei *et al.*  
Appl. No.: 16/526,614  
Filing Date: July 30, 2019  
Docket No.: 28888-2339 (BN190626USN2)

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its licensees and others authorized by ASSIGNEE, and its successors in title, whether occurring before or after this consent, which would otherwise constitute infringement of ASSIGNOR's moral rights, in or related to the SUBJECT MATTER.

INVENTOR hereby acknowledges ASSIGNEE as the Applicant for all patent applications, patents, registrations, and certificates related to the SUBJECT MATTER, and authorizes ASSIGNEE to apply for, at ASSIGNEE's sole discretion, for such and authorizes and requests the Commissioner of Patents of the U.S., and any Official of any country or countries foreign to the U.S., whose duty it is to issue patents, registrations, and certificates, to issue to the ASSIGNEE.

INVENTOR agrees to perform the following in good faith, when requested, and without further consideration, to carry out the intent and purpose of this ASSIGNMENT: (1) communicate to the ASSIGNEE all facts known to the INVENTOR regarding the SUBJECT MATTER, including without limitation all information known to INVENTOR that may be considered material to patentability; (2) promptly execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desired by ASSIGNEE to secure to ASSIGNEE any and all of the rights, titles, and interests herein conveyed; (3) promptly perform all lawful acts that ASSIGNEE considers desirable for securing, maintaining, enforcing, and defending patent protection relating to the SUBJECT MATTER in the U.S. and in all foreign countries and for vesting in ASSIGNEE all rights, titles, and interests herein conveyed in the U.S. and in all foreign countries.

INVENTOR further agrees to provide any and all successors, assigns, or legal representatives of ASSIGNEE with the benefits and assistance provided to ASSIGNEE herein in this Assignment.

INVENTOR hereby authorizes and requests the legal representative of ASSIGNEE to insert on this Assignment any further identification, including the application number and filing date of the APPLICATION, when known.

INVENTOR covenants that: (1) no assignment, grant, mortgage, license, or other agreement affecting any of the rights, titles, and interests herein conveyed has been made to another or others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned; and (2) the INVENTOR shall not hereafter make any assignment, grant, mortgage, license, or other agreement affecting any of the rights, titles, and interests herein conveyed.

INVENTOR acknowledges that, to the best of his or her knowledge, the SUBJECT MATTER is patentable, and further agrees not to take any action, or to assist or request any third party, in challenging or opposing, on any grounds whatsoever, any of ASSIGNEE'S rights, titles, and interests granted under this Assignment, or the validity or enforceability of any such rights, titles, and interests. INVENTOR further

Title: COREference-Aware Representation Learning for  
Neural Named Entity Recognition  
Inventor(s): Fei et al.  
Appl. No.: 16/526,614  
Filing Date: July 30, 2019  
Docket No.: 28888-2339 (BN190626USN2)

acknowledges that ASSIGNEE'S patent counsel presenting this Assignment does not represent INVENTOR personally, and INVENTOR has the right to seek independent counsel of his or her choosing. No course of conduct or dealing between the parties shall act as an amendment, modification, or waiver of any provision of this Agreement, and only an amendment, modification, or waiver which is contained in a written agreement signed by both ASSIGNEE and INVENTOR shall be effective.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

07/26/2019

Date

INVENTOR Signature:



INVENTOR Name:

Hongliang FEI

INVENTOR Address:

Sunnyvale, CA 94086

07/26/2019

Date

INVENTOR Signature:



INVENTOR Name:

Zeyu DAI

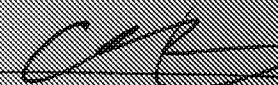
INVENTOR Address:

College Station, TX 77840

07/26/2019

Date

INVENTOR Signature:



INVENTOR Name:

Ping LI

INVENTOR Address:

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