

## 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>
NI LAO	12/23/2017
JIAZHONG NIE	12/23/2017
FAN YANG	12/23/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	GOOGLE LLC
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	17672364
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	GGL-1331-USCON
<b>NAME OF SUBMITTER:</b>	YAMA D. NEZAM
<b>SIGNATURE:</b>	/Yama D. Nezam/
<b>DATE SIGNED:</b>	03/10/2022
<b>Total Attachments: 2</b>	
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source=GGL-1331-USCON_AssignmentFromPCT#page2.tif	

**JOINT INVENTION ASSIGNMENT OF WORLDWIDE RIGHTS**

**WHEREAS**, we, Ni Lao, a citizen of China, residing in Belmont, California; Jiazhong Nie, a citizen of China, residing in Mountain View, California; and Fan Yang, a citizen of China, residing in Pittsburgh, Pennsylvania, as Assignors, have made an invention entitled

**“NATURAL LANGUAGE PROCESSING WITH AN-N-GRAM MACHINE”**

(the “Invention”) as described in either (1) a previously filed patent application according to the PCT or the USPTO, or (2) a patent application to be filed according to the PCT or the USPTO (the “Application”); and

**WHEREAS**, Google LLC, 1600 Amphitheatre Parkway, Mountain View, California 94043, a corporation organized and existing under the laws of the State of Delaware, as Assignee, is desirous of receiving and securing the entire right, title and interest in and to said invention in all countries throughout the world and, in and to any application for United States Letters Patent on the Invention and the United States Letters Patent to be issued upon the Application, any application for Letters Patent or similar legal protection claiming priority to the Application in all countries throughout the world and any Letters Patent to be issued claiming priority to the Application in all countries throughout the world;

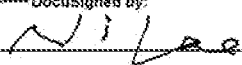
**NOW, THEREFORE**, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, conveyed, and set over, and do hereby sell, assign, transfer, convey, and set over unto the assignee, its lawful successors and assigns, our entire right, title, and interest in and to the Invention and the Application now existing or in the future, including any and all divisions, continuations, and continuations-in-part, national stage applications thereof, any applications claiming priority to the Application and all Letters Patent of the United States which may be granted thereon, and all reissues and re-examinations thereof, and all rights to claim priority on the basis of such applications, and all applications for Letters Patent or similar legal protection which may hereafter be filed for the Invention in any foreign country and all Letters Patent or similar legal protection which may be granted on the Invention in any foreign country, and all extensions, renewals, reissues, and re-examinations thereof, and any and all causes of action, claims, and demands and other rights for, or arising from, any infringement, breaches, or misappropriation, including past infringements, breaches, and misappropriations of the Invention or the Application, the right to take actions related to the rights and to assert any and all causes of

action related to the Invention and the Application, including those accrued in Assignor's favor for infringement and misappropriation thereof, and the right to recover and have past, present, and future damages and profits for infringement and misappropriation, in all countries, territories and possessions throughout the world and throughout the universe in accordance with the laws thereof, to the full extent of such rights, and we hereby authorize and request the Commissioner for Patents of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent or similar legal protection for the Invention or the Application to Assignee, its successors and assigns, in accordance with the terms of this Agreement.

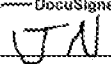
**AND, WE HEREBY** covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed, and will not execute any agreement in conflict with this Assignment;

**AND, WE HEREBY** further covenant and agree that we will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting the Invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title of the Invention and the Application in Assignee, its successors and assigns, execute all divisional, continuation, reissue, and re-examination applications, and any applications claiming priority to the Application, and make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent and any other protection for the Invention in the United States, and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by Assignee, its successors and assigns.

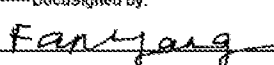
**IN WITNESS WHEREOF**, the Assignors have executed this document on the date indicated below:

DocuSigned by:  
  
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ADCF7C87D8C484... Ni Lao

12/23/2017  
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Date

DocuSigned by:  
  
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27A984F3713944E... Jiazhong Nie

12/23/2017  
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Date

DocuSigned by:  
  
-----  
78494F1C03804B3... Fan Yang

12/23/2017  
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Date