

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT6466170

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>LIU LIU</td><td>12/18/2020</td></tr><tr><td>ZHENYU GU</td><td>11/03/2020</td></tr><tr><td>SHUANGCHEN LI</td><td>11/05/2020</td></tr><tr><td>YUAN XIE</td><td>11/02/2020</td></tr></tbody></table>	Name	Execution Date	LIU LIU	12/18/2020	ZHENYU GU	11/03/2020	SHUANGCHEN LI	11/05/2020	YUAN XIE	11/02/2020	
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LIU LIU	12/18/2020										
ZHENYU GU	11/03/2020										
SHUANGCHEN LI	11/05/2020										
YUAN XIE	11/02/2020										
RECEIVING PARTY DATA											
Name:	ALIBABA GROUP HOLDING LIMITED										
Street Address:	FOURTH FLOOR, ONE CAPITAL PLACE, P.O. BOX 847										
City:	GEORGE TOWN, GRAND CAYMAN										
State/Country:	CAYMAN ISLANDS										
PROPERTY NUMBERS Total: 1											
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>16562376</td></tr></tbody></table>	Property Type	Number	Application Number:	16562376							
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Application Number:	16562376										
CORRESPONDENCE DATA											
Fax Number:	(202)408-4400										
<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>											
Phone:	2024084000										
Email:	Jerri.Hitchcock@finnegan.com										
Correspondent Name:	FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP										
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Address Line 4:	WASHINGTON, D.C. 20001										
ATTORNEY DOCKET NUMBER:	12852.0316-00000										
NAME OF SUBMITTER:	JERRI HITCHCOCK										
SIGNATURE:	/Jerri Hitchcock/										
DATE SIGNED:	12/23/2020										
Total Attachments: 4 source=Assignments#page1.tif source=Assignments#page2.tif source=Assignments#page3.tif source=Assignments#page4.tif											

STATEMENT OF ASSIGNMENT

Whereas Liu LIU (hereinafter "INVENTOR"), invented certain new and useful improvements as set forth in the patent application entitled:


SYSTEMS AND METHODS FOR ACCELERATING SPARSE NEURAL NETWORK EXECUTION

which bears U.S. application serial No. 16/562,376, filed September 5, 2019.

Whereas the INVENTOR has executed an agreement:

- (a) Assigning to Alibaba Group Holding Limited having a place of business at Fourth Floor, One Capital Place, Grand Cayman, Cayman Islands (hereinafter "ASSIGNEE"), (1) the entire right, title and interest, and any and all revenues and rights to revenue, for any purpose, associated with commercialization, everywhere in the world, to (A) any and all inventions described in said Application, (B) said Application, (C) any patent that may be granted thereof, (D) any patent applications or patents which may claim priority of (or serve as the basis for a priority claim by) said Application (including but not limited to continuations, divisions, continuations-in-part, substitutes, reissues, reexaminations or extensions thereof, together with all priority rights and counterpart applications under any existing or future international patent conventions, agreements or treaties), and (2) the right to sue third parties for patent infringement (including but not limited to damages) accruing based on activities occurring prior to the execution date hereof;
- (b) Authorizing and requesting the Commissioner of Patents to issue any and all United States Patents resulting from said application or any division, continuation, substitute, renewal, re-examination or reissue thereof to the ASSIGNEE;
- (c) Agreeing to execute all papers and documents and, entirely at the ASSIGNEE's expense, and to communicate to the ASSIGNEE any facts known to us respecting the improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications; and
- (d) Agreeing that the terms, covenants and conditions of this assignment have inured to the benefit of the ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon the INVENTOR, as well as the INVENTOR's heirs, legal representatives and assigns.

IN TESTIMONY WHEREOF, I **Roger Shang** have executed this document on the date indicated below.



Signature of Officer
as Assignee's Representative

12/18/2020

Date

San Mateo, CA

Inventor's City, State of residence

ASSIGNMENT

WHEREAS I/We, the below-named inventor(s) (hereinafter referred to as Assignor(s)), of an invention entitled:

SYSTEMS AND METHODS FOR ACCELERATING SPARSE NEURAL NETWORK EXECUTION

as claimed in United States Application No. 16/562,376 (Confirmation No. 1920), filed herewith on September 5, 2019, attached hereto, and as claimed in PCT International Application No. _____, filed herewith on _____, and attached hereto; and

WHEREAS, **Alibaba Group Holding Limited**, a corporation of Cayman Islands, whose post office address is Fourth Floor, One Capital Place, P.O. Box 847, George Town, Grand Cayman, Cayman Islands (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application and the PCT International application and all applications to be filed based on the PCT International application and Letters Patents which may be granted in those applications;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional Application No. 62/869,484, filed July 1, 2019, (if any), and the application for United States Letters Patent and the PCT International application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority in any foreign country on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of the application for United States Letters Patent and/or the PCT International application in any foreign country, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Director of the United States Patent and Trademark Office and any official of any foreign country whose duty is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;


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

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this 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 to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this 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 the Assignee, its successors and assigns;

AND, I/WE HEREBY authorize and request that the attorneys having Power of Attorney in the applications, insert in parentheses above, the filing date and application number of said applications when known.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

Name: Zhenyu GU
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: 
Date: 11/03/2020

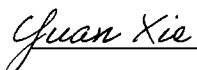
Name: Liu LIU
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: _____
Date: _____

Name: Shuangchen LI
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: _____
Date: _____

Name: Yuan XIE
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: 
Date: 11/2/2020

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

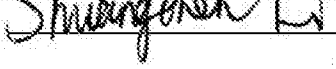
Name: Zhenyu GU
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: _____
Date: _____

Name: Liu LIU
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: _____
Date: _____

Name: Shuangchen LI
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: 
Date: 11/05/2020

Name: Yuan XIE
Address: Alibaba Group Legal Department
400 South El Camino Real, Suite 400
San Mateo, CA, 94402

By: _____
Date: _____