PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XIANJIE CHEN	10/23/2017
WENLIN CHEN	10/24/2017
LIANG XIONG	10/23/2017
TIANSHI GAO	10/23/2017

RECEIVING PARTY DATA

Name:	FACEBOOK, INC.
Street Address:	1601 WILLOW ROAD
City:	MENLO PARK
State/Country:	CALIFORNIA
Postal Code:	94025

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15694707

CORRESPONDENCE DATA

Fax Number:	(214)953-6503

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.

Phone:	214 953 6500
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Correspondent Name:	BAKER BOTTS L.L.P./FACEBOOK INC.
Address Line 1:	2001 ROSS AVENUE
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ATTORNEY DOCKET NUMBER:	079894.4789
NAME OF SUBMITTER:	JUNIFEL B. GUTIERREZ
SIGNATURE:	/Junifel B. Gutierrez/
DATE SIGNED:	10/24/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

COMBINED ASSIGNMENT AND DECLARATION (37 C.F.R. § 1.63)

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to Facebook, Inc., a Delaware corporation, having a place of business at 1601 Willow Road, Menlo Park, California 94025 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional patent application filed under 35 U.S.C. § 111(b), non-provisional patent application filed under 35 U.S.C. § 111(a), international patent application filed according to the Patent Cooperation Treaty (PCT), or U.S. national-phase patent application filed under 35 U.S.C. § 371 ("APPLICATION"):

Application No. 15/694,707, entitled **"MIXED MACHINE LEARNING ARCHITECTURE"** filed on **1 September 2017**

2. The entire worldwide right, title, and interest in and to: (a) the APPLICATION; (b) all patent applications claiming priority from the APPLICATION; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other patent applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the patent applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign patent application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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.

DECLARATION (37 C.F.R. § 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. § 1.76)

By signing below, INVENTOR further attests to the following:

- The APPLICATION was made or authorized to be made by INVENTOR.

- INVENTOR believes that INVENTOR is the original inventor or an original joint inventor of a claimed invention in the APPLICATION.

- INVENTOR acknowledges the duty to disclose to the United States Patent and Trademark Office all information known to INVENTOR to be material to patentability as defined in 37 CFR § 1.56, which for a continuation-in-part includes information known to INVENTOR to be material to patentability as defined in 37 CFR § 1.56 that became available between the filing date of the prior patent application and the National or PCT filing date of the continuation-in-part application.

INVENTOR hereby acknowledges that any willful false statement made in this Declaration is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five years, or both.

Name and Signature	Date of Signature
Xianjie Chen Xianjie Chen (Oct 23, 2017) **Xianjie Chen**	Oct 23, 2017
Wenlin Chen Wenlin Chen (Oct 24, 2017) **Wenlin Chen**	Oct 24, 2017
Liang Xiong Liang Xiong (Oct 23, 2017) **Liang Xiong**	Oct 23, 2017
Tianshi Gao Tianshi Gao (Oct 23, 2017) **Tianshi Gao**	Oct 23, 2017