PATENT ASSIGNMENT COVER SHEET

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NATURE OF CONVEYANCE:	ASSIGNMENT

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Name	Execution Date
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WILLIAM SCOTT PAKA	02/13/2020
SHASHI KUMAR	02/05/2021

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17355731

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DATE SIGNED:	06/24/2021	

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PATENT 506732063 REEL: 056648 FRAME: 0189

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor ("Assignor") hereby sells and assigns, unto Optum Technology, inc. ("Assignee"), and its successors and assigns, Assignor's entire worldwide right, title, and 100% interest in and to all inventions, improvements, and discoveries (collectively, the "inventions") set forth in the invention Disclosure Form IDF-001331, titled "An Unsupervised Approach to Assign ICD Codes to Clinical Text and to Rank the Code against the Latter," as well as in and to:

- a) all improvements and modifications to any of the inventions; and
- b) all other patent applications, patents, utility models, design registrations, other rights of exclusion, and inventors' certificates in every country or region setting forth
 - i. any or all of the inventions, or
 - il. any Improvements or modifications to any or all of the Inventions, including all continuation, divisional, continuation-in-part (to the extent based upon prior Inventions), renewal, substitute, nonprovisional, and Convention applications based in whole or in part upon said Inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said Inventions or upon said applications,
- c) every priority right that is or may be predicated upon or arise from any of the inventions; and
- d) the right to pursue, collect, and retain in Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the inventions and any other rights assigned by this Assignment; and
- e) any/all copyrights, trade secrets, trademarks and associated good will, including any moral rights, which may be granted on the invention.

Assignee is hereby authorized to file patent applications in any or all countries on any or all of the Inventions in the name of Assignee or in the name of Assignee or otherwise as Assignee may deem advisable, under the Paris Convention and/or Patent Cooperation Treaty or otherwise; the Commissioner of Patents of the United States Patent and Trademark Office (and officials of other countries whose duty it is to issue patents) being hereby authorized to issue or transfer all Letters Patent to Assignee in accordance with this Assignment.

Assignor covenants that he has the full power and authority to make this Assignment and that such assigned rights are not encumbered by any grant, pledge, license, or any other rights previously given. Further, Assignor represents and warrants that this assignment does not infringe on the rights of any person and neither he nor his current or past employer has any right or claim to the inventions in any manner, whatsoever and undertakes to furnish a declaration in a form as requested by Assignee. Assignor will do all acts reasonably serving to ensure that the inventions shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by Assignor if this Assignment had not been made, and particularly to execute and deliver to Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by Assignee, to furnish Assignee with all facts relating to any of the inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody any of the inventions, and to testify in any proceedings relating to any of the inventions.

Fittle: An Unsupervised Approach to Assign ICD Codes to Clinical Text and to Rank the Code against the Latter IDF (Number: IDF-001331 Inventor(s): Suman Roy, Amit Kumar, Sourabh Kumar Bhattacharjee, Shashi Kumar, William Scott Paka, Tanmoy Chakraborty

PATENT REEL: 056648 FRAME: 0190 Assignor hereby grants Assignee, its successors, legal representatives, and assigns the right to insert in this Assignment any further identification (including, but not limited to Attorney Docket Number, and patent application serial number, date, and other information) that may be necessary or desirable for valid recordation of this Assignment.

This Assignment is deemed to be effective at least as early as the earliest filing date listed above and/or associated with any of the inventions. To the extent that Assignor has previously assigned, to Assignee, any right, title, or interest in the inventions, this document shall be interpreted as confirming the validity of such prior assignment(s).

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Signature of Witness #1	Date
SOURAVI HALDER	
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and the same of th	14/02/2021 Date
Signature of Withess #2	Date
DEBATYOTI BERA	
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Title: An Unsupervised Approach to Assign ICD Codes to Clinical Text and to Bank the Code against the Latter IDF Number: IDF-001331

inventor(s): Suman Roy, Amit Kumar, Sourabh Kumar Bhattacharjee, Shashi Kumar, William Scott Paka, Tanmoy Chakraborty

Signature of Witness #2	Date 13/2/20
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Hah Kumar Shashi Kumar	05 feb. 2-02 l Date
Aadhaar/PAN: <u>EYJPK2722J</u> Signature of Witness #1 0	Date 5 2/2/
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Title: An Unsupervised Approach to Assign ICD Codes to Clinical Text and to Rank the Code against the Latter IDF Number: IDF-001331
Inventor(s): Suman Roy, Amit Kumar, Sourabh Kumar Bhattacharjee, Shashi Kumar, William Scott Pake, Tanmoy Chakraborty

PATENT REEL: 056648 FRAME: 0192

RECORDED: 06/24/2021

Printed Name of Witness #2