

## 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>
DAVID BILLIGMEIER	10/16/2019
JUN LI	10/16/2019
JASON KIP DAVIS	10/16/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	OPTUM, INC.
<b>Street Address:</b>	9900 BREN ROAD EAST
<b>City:</b>	MINNETONKA
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55343
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16656261
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(704)444-1111
<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>	
<b>Phone:</b>	704-444-1000
<b>Email:</b>	usptomail@alston.com
<b>Correspondent Name:</b>	ALSTON & BIRD LLP
<b>Address Line 1:</b>	BANK OF AMERICA PLAZA
<b>Address Line 2:</b>	101 SOUTH TRYON STREET, SUITE 4000
<b>Address Line 4:</b>	CHARLOTTE, NORTH CAROLINA 28280-4000
<b>ATTORNEY DOCKET NUMBER:</b>	054642/537683
<b>NAME OF SUBMITTER:</b>	DANIEL J. O'CONNOR
<b>SIGNATURE:</b>	/Daniel J. O'Connor/
<b>DATE SIGNED:</b>	10/17/2019
<b>Total Attachments: 5</b>	
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## 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, Inc.  
9900 Bren Road East  
Minnetonka, MN 55343

(“Assignee”), and its successors and assigns, Assignor’s entire worldwide right, title, and interest in and to all inventions, improvements, and discoveries (collectively, the “Inventions”) set forth in the application received concurrently herewith, referred to by the Attorney Docket Number provided herewith, and titled:

“MACHINE-LEARNING BASED SYSTEMS AND METHODS FOR GENERATING AN ORDERED LISTING OF OBJECTS FOR A PARTICULAR USER”,

and as set forth in: United States Patent Application No. 62/895,887, filed on September 4, 2019,

as well as in and to: (a) all improvements and modifications to any of the Inventions, (b) the above-identified patent application(s) (if any) and 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 (ii) 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 (the items referenced in (b) collectively being referred to hereinafter as the “Applications and Granted Rights”), (c) every priority right that is or may be predicated upon or arise from any of the Inventions or the Applications and Granted Rights, 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, the Applications and Granted Rights, and any other rights assigned by this Assignment;

Assignee being hereby authorized to file patent applications in any or all countries on any or all of the Inventions in the name of Assignor 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;

this Assignment being under covenant, not only that full power to make the same is held by Assignor, but also that such assigned right is not encumbered by any grant, license, or other right

Title: Machine-Learning Based Systems And Methods For Generating An Ordered Listing  
Of Objects For A Particular User  
Attorney Docket Number: 054642/537683  
Inventor: Billigmeier, et al.

previously given, and that Assignor will do all acts reasonably serving to ensure that the Inventions and the Applications and Granted Rights 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 or the Applications and Granted Rights.

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Attorney Docket Number: 054642/537683  
Inventor: Billigmeier, et al.

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 or the Applications and Granted Rights, this document shall be interpreted as confirming the validity of such prior assignment(s).

/ David Billigmeier /  
David Billigmeier

10/16/2019  
Date

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/ Jun Li /  
Jun Li

10/16/2019  
Date

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Jason Kip Davis  
Jason Kip Davis

10/16/2019  
Date

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