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 OMB No. 0651-0027 (exp. 03/31/2012)

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PATENTS O 103674543

To the Director of the U.S. Patent and Trademark Office: Pleas	e record the attached documents or the new address(es) below.
Name of conveying party(ies)	2. Name and address of receiving party(ies)
Mohamed N. Ahmed	Name: International Business Machines Corporation
Aaron K. Baughman John F. Behnken	Internal Address:
Mauro Marzorati	
Additional name(s) of conveying party(ies) attached? Yes X No	j i
3. Nature of conveyance/Execution Date(s):	Street Address: New Orchard Road
Execution Date(s)2/4/16, 2/5/16, 2/5/16 & 2/4/16	
Assignment Merger	City: Armonk
Security Agreement Change of Name	Oity. Aimonk
Joint Research Agreement	State:NY
Government Interest Assignment	Country: US Zip:10504
Executive Order 9424, Confirmatory License	
Other	Additional name(s) & address(es) attached? Tyes X No
4. Application or patent number(s): This	document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
15/019,270 filed 02/09/2016 '	
Additional numbers at	l ached? ☐ Yes ☒ No
5. Name and address to whom correspondence	6. Total number of applications and patents
concerning document should be mailed:	involved: 1
Name: Rakesh Garg	7 Total foo (27 CED 4 24/b) 9 2 44) \$ 10 00
Internal Address:	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
meriai Addiess	X Authorized to be charged to deposit account
01 111	Enclosed
Street Address: 4521 Copper Mountain Lane	None required (government interest not affecting title)
City: Richardson	8. Payment Information
State:Texas Zip75082	
Phone Number 972.839.0027	
Fax Number: 972.294.3784	Deposit Account Number 09-0457 02/17/2016 KHGUYEN1 00000016 090457 1501927
Email Address: rgarg@garglaw.com	Authorized լվայթանը Name Rakes իրանությանը
9. Signature:	02/10/2016 Date
Signature	Total number of pages including cover
Rakesh Garg	sheet, attachments, and documents:

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:

Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

DECLARATION (37 C.F.R. 1:63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1:76) AND ASSIGNMENT

FORECASTING AND CLASSIFYING CYBER-ATTACKS USING ANALYTICAL DATA BASED NEURAL EMBEDDINGS

As a below named inventor, I hereby declare that:

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The above-identified application was made or authorized to be made by me.

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I have reviewed and understand the contents of the application, including the claims

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Page 1 of 2

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal Name of					
Signature:	Bhane	LJSh	med	Date:	214/201
Legal Name of	Inventor: AARO	ON K. BAUG	HMAN		
Signature:			a Second Second	Date:	
Legal Name of	Inventor: JOHN	100			
Signature:		.99		Date:	
		Marie Colonia	Secure Secure Secure		
Legal Name of	Inventor: MAU	RO MARZO	RATI		
signature:				Date:	
			/ . (7) (5)		

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(1) Legal Name of Inventor: MOHAMED N. AHMED	
Signature:	Date
(2) Legal Name of Inventor: AARON K. BAUGHMAN	
Signature:	Date:
(3) Legal Name of Inventor: JOHN F. BEHNKEN	
Signature:	Date:
(4) Legal Name of Inventor: MAURO MARZORATI	
Signature:	Date:

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12) Logarivanic of inventor monavier in Amirep		:	
Signature:		Date:	
(2) Legal Name of Inventor: AARON K. BAUGHMAN			
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Signature:		Date:	
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(3) Legal Name of Inventor: JOHN F. BEHNKEN			
Signature.		Date:	2/5/16
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Signature:		Date:	

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Signature:			ni na più mani del m	Date	in in the second of the second
(2) Legal Name of Invent	ör: AARON K	BAUGHMAN			
Signature:				Date:	
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Signature:				Date	
(4) Legal Name of Invent	or: MAURO N	IARZORATI			
Signature:		学觉		Date: F	eb 4, 2016
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Page 2 of 2

PATENT REEL: 037845 FRAME: 0033