

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4766771

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	HASSAN MALIK	10/03/2011
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	THOMSON REUTERS (MARKETS) LLC	
<b>Street Address:</b>	195 BROADWAY	
<b>City:</b>	NEW YORK	
<b>State/Country:</b>	NEW YORK	
<b>Postal Code:</b>	10036	
<b>PROPERTY NUMBERS Total: 1</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	13042266	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<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>		
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<b>NAME OF SUBMITTER:</b>	SHANNON FRITSCHKE	
<b>SIGNATURE:</b>	/Shannon Fritsche/	
<b>DATE SIGNED:</b>	01/09/2018	
<b>Total Attachments: 3</b>		
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## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT3206503

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>SEQUENCE:</b>	1	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
HASSAN MALIK		10/03/2011
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	THOMSON REUTERS (MARKETS) LLC	
<b>Street Address:</b>	195 BROADWAY	
<b>City:</b>	NEW YORK	
<b>State/Country:</b>	NEW YORK	
<b>Postal Code:</b>	10007	
<b>PROPERTY NUMBERS Total: 3</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	13046266	
Application Number:	13107665	
Application Number:	13213324	
<b>CORRESPONDENCE DATA</b>		
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<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>		
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<b>ATTORNEY DOCKET NUMBER:</b>	113027.000087US2	
<b>NAME OF SUBMITTER:</b>	KEVIN T. DUNCAN	
<b>SIGNATURE:</b>	/Kevin T. Duncan/	
<b>DATE SIGNED:</b>	01/30/2015	
<b>Total Attachments: 2</b>		
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## ASSIGNMENT - CORRECTED

WHEREAS, I, Hassan Malik, residing at 402 Pheasant Run, Monmouth Junction, NJ 08852, USA, (hereinafter referred to as ASSIGNOR), am the inventor of an invention described in a provisional application entitled **AUTOMATIC DATA CLEANING FOR MACHINE LEARNING CLASSIFIERS**, the application being identifiable in the United States Patent and Trademark Office by an Application No. **61/445,236**, filed **February 22, 2011**, and also described in an application for Letters Patent of the United States entitled **AUTOMATIC DATA CLEANING FOR MACHINE LEARNING CLASSIFIERS**, the application being identifiable in the United States Patent and Trademark Office by an Application No. **13/046,266**, filed **March 11, 2011**; and

WHEREAS, Thomson Reuters (Markets) LLC, a corporation, organized and existing under the laws of the State of Delaware, and having offices at **195 Broadway, New York, New York 10007**, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained thereof;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, we transfer to Assignee, its successors and assigns, our entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications including continuations applications, continuing applications, divisional applications, reissue applications, and continuation-in-part applications, all Letters Patent or similar legal protection issuing thereon, and all rights and benefits under and applicable treaty or convention; and we authorize the Director of the United States Patent and Trademark Office or foreign equivalent thereof to issue the Letters Patent or similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained. I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

PATENT  
REEL: 034856 FRAME: 0790

PATENT  
REEL: 044572 FRAME: 0537

