506451456 01/15/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6498226

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PEGGY J. QUALLS	01/04/2021
GHADA I. KHASHAB	01/14/2021
LORI MAMMOSER	12/21/2020
AJAY JOSE PAUL	12/15/2020
ANTHONY R. BANDOS	12/18/2020
SIDY DIOP	12/18/2020

RECEIVING PARTY DATA

Name:	BANK OF AMERICA CORPORATION
Street Address:	214 N. TRYON STREET
Internal Address:	MAILCODE: NC1-027-20-05
City:	CHARLOTTE
State/Country:	NORTH CAROLINA
Postal Code:	28255

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17149812

CORRESPONDENCE DATA

Fax Number: (845)362-6111

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: 8453626100

Email:cziskind@weissarons.comCorrespondent Name:WEISS & ARONS LLPAddress Line 1:63 SOUTH MAIN STREET

Address Line 4: SPRING VALLEY, NEW YORK 10977

ATTORNEY DOCKET NUMBER:	104-646
NAME OF SUBMITTER:	JOEL WEISS
SIGNATURE:	/Joel Weiss/
DATE SIGNED:	01/15/2021

PATENT REEL: 054929 FRAME: 0943 Total Attachments: 12
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source=104-646_Assignments_Declarations_as_Filed#page2.tif
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PATENT REEL: 054929 FRAME: 0944

COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention			ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION
As the below	name	ed inv	entor, I hereby declare that:
This declaration is directed to:		Ø	The attached application, or
			United States application or PCT international application number
The above-identified application was made or authorized to be made by me.			
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.			
I hereby ackno imprisonment	owled of no	ige th ot mo	at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or re than five (5) years, or both.
ASSIGNMENT			

WHEREAS, I, Peggy J. Qualls ("Assignor"), a citizen of the United States of America, residing in Oswego, Illinois, have invented the above invention. If the following lines are blank, the above application was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application number below after they become known and prior to filing the recordation.

U.S. Application No. 11/149, 812 filed 0/15/2021

WHEREAS, BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of Delaware, and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the United States of America, and in any and all countries foreign thereto:

NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuations in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all nonprovisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

WARNING:

an issued patent (see 37 CFR 1.14). Checks and credit can purposes are not retained in the application file and there	d authorization forms PTO-2038 submitted	hed application or for payment
LEGAL NAME OF INVENTOR		
Inventor: Peggy I. Qualls	Date:	:
Signature: 1 Ptyp Audls	1	

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COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION
As the below	named inventor, I hereby declare that:
This declaration is directed to:	v The attached application, or
	United States application or PCT international application number
The above-ide	entified application was made or authorized to be made by me.
I believe that	am the original inventor or an original joint inventor of a claimed invention in the application.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or of not more than five (5) years, or both.
81 81	ASSIGNMENT
invented the a otherwise, to	
	U.S. Application No. 17/149, 812 , filed 01/15/2021 .
Delaware, and title and interest	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of I having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for the said Assignor, representative countries fore countries in its entitled under Letters Patent in-parts and exconfidential in request the Coinventions or rinterest. I represent further nominees, any provisional, diesecutives.	ORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or ne making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal es, the full and exclusive right, title and interest for the territory of the United States of America and all ign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign is own name and to claim any priority rights for such foreign applications to which such applications are international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuations, tensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, formation, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and ammissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and essent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will exconsideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or and all facts known to me regarding said inventions whenever requested, and that I will execute all nonvisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal light all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its

successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

IDF10620

WARNING:

LEGAL NAME OF INVENTOR		
Inventor: Ghada I. Khashab	Date: 1/14/2021	
Signature: / Ghada bhashab	<i>I</i>	

COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention		ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION
As the below	named invento	or, I hereby declare that:
This declaration is directed to:	(W) 133	e attached application, or
	☐ Ur file	nited States application or PCT international application numbere
The above-ide	entified applica	ition was made or authorized to be made by me.
I believe that	I am the origin	al inventor or an original joint inventor of a claimed invention in the application.
		ny willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or han five (5) years, or both.
		ASSIGNMENT
have invented otherwise, to	I the above inv comply with 3: Bank of Americ rdation.	r ("Assignor"), a citizen of the United States of America , residing in Charlotte , North Carolina , ention. If the following lines are blank, the above application was filed on even date herewith, 7 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the tato insert the filing date and application number below after they become known and prior to
	U.S	i. Application No. 17/149, 8/2 filed 01/15/2021
Delaware, and title and inter-	I having its offi est in and to th	CA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of ces and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, se aforesaid inventions and in and to all applications and Letters Patent therefor granted in the d in any and all countries foreign thereto:
payment for t said Assignor, representative countries fore countries in its entitled under Letters Patent in-parts and e	he making of ir by these prese es, the full and ign thereto, an s own name an international granted there xtensions there	MIT MAY CONCERN, be it known that, for good and valuable consideration, including salary or exentions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I exist do sell, assign and transfer unto said Assignee, its successors, assigns and legal exclusive right, title and interest for the territory of the United States of America and all indictions to the world and in space, (including the right to apply for Letters Patent in foreign and to claim any priority rights for such foreign applications to which such applications are conventions, treaties, or otherwise), in and to said inventions and in and to all applications and for, and all non-provisionals, divisionals, reissues, reexaminations, continuations and in and to all copyrights, trademarks with their associated goodwill, trade secrets, discompilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and

request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

[Page 1 of 2]

WARNING:

purposes are not retained in the application file and therefo	ore are not publicly available.
LEGAL NAME OF INVENTOR	
Inventor: Lari Mammoser Decisionersy: Lori Mammoser Signature: / Lori Mammoser	Date: 12/21/2020

COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention		ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION
As the below	named ir	ventor, I hereby declare that:
This declarati	•	The attached application, or
		United States application or PCT international application numberfiled on
The above-ide	entified a	oplication was made or authorized to be made by me.
I believe that	l am the	original inventor or an original joint inventor of a claimed invention in the application.
		that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or ore than five (5) years, or both.
		ASSIGNMENT
WHEREAS, I, A	Ajay Jose I the abo	Paul ("Assignor"), a citizen of the United States of America, residing in Davidson, North Carolina, reinvention. If the following lines are blank, the above application was filed on even date herewith,

otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application number below after they become known and prior to filing the recordation.

U.S. Application No. 17/149,8/2 filed 0//5/2021

WHEREAS, BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of Delaware, and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the United States of America, and in any and all countries foreign thereto:

NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuationin-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all nonprovisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

[Page 1 of 2]

PATENT REEL: 054929 FRAME: 0951

WARNING:

LEGAL NAME OF INVENTOR	
Inventor: Ajay Jose Paul tom processioned by:	Date:
Signature: / Ajay Paul	<u> </u>

IDF10620

COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Invention	ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION	
As the below	named inventor, I hereby declare that:	
This declaration is directed to:	···· iv: ine anached abbitation of	
	United States application or PCT international application number	
The above-identified application was made or authorized to be made by me.		
I believe that	am the original inventor or an original joint inventor of a claimed invention in the application.	
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.		
	ASSIGNMENT	
have invented otherwise, to		
	U.S. Application No. 17/149, 8/2 filed 01/15/2021	
Delaware, and title and intere	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of I having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, as in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:	
NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and		

interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

WARNING:

LEGAL NAME OF INVENTOR	Concerno parametry de anable.
Inventor: Anthony R. Bandos	Date:
Signature: / Anthony Bandos /	

IDF10620

COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Invention	ARTIFICIAL INTELLIGENCE VULNERABILITY COLLATION	
As the below	named inventor, I hereby deciare that:	
This declaration is directed to:	The attached application, or	
	United States application or PCT international application number	
The above-identified application was made or authorized to be made by me.		
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.		
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.		
	ASSIGNMENT	
invented the a otherwise, to		
	U.S. Application No. 17/149, 812 filed 01/15/2021 .	
Delaware, and title and interest	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of I having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, est in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:	
NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee or its successors, assigns		

nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

IDF10620

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment ourposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR	
Inventor: Sidy Diop (1888)	Date: 12/18/2020
Signature: / Sily	Diop

RECORDED: 01/15/2021