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(57) Abstract :

The present invention discloses a Legal Chatbot Using Natural Language Processing and method thereof. The present invention pertains to the field of legal technology, particularly to a legal chatbot system, named Kanoon Mitra. The system integrates advanced Natural Language Processing (NLP) and Machine Learning algorithms and utilizes a comprehensive corpus of Indian legal statutes and case law. This design enables it to provide accurate and contextually appropriate legal information to users round-the-clock. The chatbot system also includes a user-friendly interface that bridges the knowledge gap between individuals and the complex legal system, making it more accessible and affordable to the public. Additionally, the system integrates high-level search and filter capabilities, user ratings, and reviews, allowing individuals and businesses to find and connect with local lawyers and advocates that fit their specific needs. This innovation represents a significant step towards improving access to legal information and services in India and has the potential to revolutionize the legal industry by enhancing the public's understanding of their legal rights and obligations. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 18 No. of Claims : 8

“FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	
				Filing date:	
				Amount of Fee paid:	
				CBR No:	
				Signature:	
1. APPLICANT’S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
Brainware University, Kolkata		Indian	India	398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125	
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person ()		Other than Natural Person			
		Small Entity (✓)	Startup ()	Others ()	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?		Yes ()		No (✓)	
If “No”, furnish the details of the inventor(s)					
Name in Full		Nationality	Country of Residence	Address of the Inventor	
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9. Debarun Joardar	Indian	India	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
10. Sayan Mondal	Indian	India	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125

5. TITLE OF THE INVENTION

“A LEGAL CHATBOT USING NATURAL LANGUAGE PROCESSING AND METHOD THEREOF”

6. AUTHORISED REGISTERED PATENT AGENT(S)

IN/PA No.

Name

Mobile No.

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Name

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Fax No.	
E-mail ID	registrar@brainwareunive rsity.ac.in

**8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN-
CONVENTION**

COUNTRY, PARTICULARS OF CONVENTION APPLICATION

Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)

**9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF-
INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY
(PCT)**

International application number	International filing date

**10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16,
PARTICULARS OF
ORIGINAL (FIRST) APPLICATION**

Original (first) application No.	Date of filing of original (first) application

**11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS
OF MAIN
APPLICATION OR PATENT**

Main application/patent No.	Date of filing of main application
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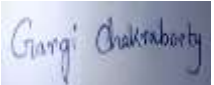
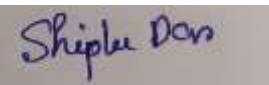
12. DECLARATIONS

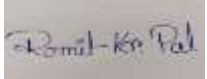
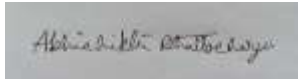
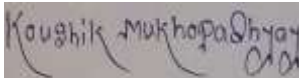
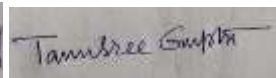

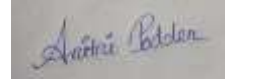

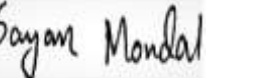


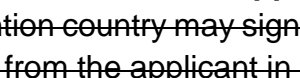
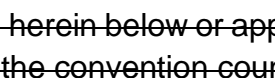
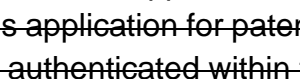
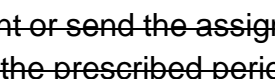
i) Declaration by the inventor(s)

(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date 14/07/2023

(b) Name	(c) Signature
1. Gargi Chakraborty	
2. Shiplu Das	
3. Romit Kumar Pal	

4.	Abhishikta Bhattacharjee		
5.	Koushik Mukhopadhyay		
6.	Tanusree Gupta		
7.	Dr. Debducta Pal		
8.	Aritri Poddar		
9.	Debarun Joardar		
10.	Sayan Mondal		

(ii) Declaration by the applicant(s) in the convention country

~~(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.~~

~~(a) Date~~

~~(b) Signature(s)~~

~~(c) Name(s) of the signatory~~

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that: -

- I am/ We are in possession of the above-mentioned invention.
- The provisional/complete specification relating to the invention is filed with this application.
- ~~The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.~~
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- I am/we are the true & first inventor(s).
- ~~I am/we are the assignee or legal representative of true & first inventor(s).~~
- ~~The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s).~~
- ~~I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.~~
- ~~My/our application in India is based on international application under Patent~~

Cooperation Treaty (PCT) as mentioned in Paragraph-9.

- ~~The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.~~
- ~~The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.~~

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/ Provisional specification) #	No. of pages: 14		
No. of Claim(s)	No. of claims: 08 No. of pages: 02		
Abstract	No. of pages: 01		
No. of Drawing(s)	No. of drawings: 02 No. of pages: 01		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

- (b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (c) Sequence listing in electronic form
- (d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.
- (f) Translation of priority document/Specification/International Search Report/International

Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

(h) Declaration of Inventorship on Form 5


(i) Power of Authority

(j) **Total fee ₹.....in Cash/ Banker's Cheque /Bank Draft bearing No.....**

Date on Bank.

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 14th day of July 2023



**Registrar
Brainware University
Barrasat, Kolkata- 700125**

Signature:

Name: Mahua Pal

Applicant: Brainware University, Kolkata

To,
The Controller of Patents
The Patent Office, at Kolkata

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule”;

FORM 2

THE PATENTS ACT, 1970

(39 of 1970)

&

5

The Patent Rules, 2003

COMPLETE SPECIFICATION

(See section 10 and rule 13)

10

TITLE OF THE INVENTION

“A LEGAL CHATBOT USING NATURAL LANGUAGE PROCESSING AND
METHOD THEREOF”

Applicant:

15

Brainware University, Kolkata,

398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West

Bengal 700125.

20

The following specification particularly describes the nature of the invention and the manner in which it is performed:

FIELD OF THE INVENTION

[001] The present invention pertains to the field of the digital legal chatbots, systems, methods and techniques with novel techniques, methods, devices and apparatus. The invention more particularly relates to a Legal Chatbot
5 Using Natural Language Processing and method thereof.

BACKGROUND OF THE INVENTION

[002] The following description provides the information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed
10 invention, or that any publication specifically or implicitly referenced is prior art.

[003] Further, the approaches described in this section are approaches that could be pursued, but not necessarily approaches that have been previously conceived or pursued. Therefore, unless otherwise indicated, it should not be
15 assumed that any of the approaches described in this section qualify as prior art merely by virtue of their inclusion in this section.

[004] This project aims to address a significant gap in the legal service provision in India, by developing a Legal Chatbot using Natural Language Processing (NLP) and Machine Learning methodologies, specifically the
20 Random Forest model. The project is undertaken in light of the existing constraints within the legal service system as dictated by the Legal Service Authorities Act, 1987.

[005] While the existing system does provide legal guidance, it is unfortunately case-specific and not accessible to all citizens. Furthermore, it tends to be

time-consuming due to the requirement of meeting low-income criteria for all but women and children.

[006] Our proposed solution, the Legal Chatbot, is intended to democratize access to legal assistance, allowing all citizens, regardless of race, caste, gender, or creed, to obtain legal remedies. This means it will offer unrestricted, inclusive legal support, thus addressing the limitations of the existing system. The main issue our target audience faces today is the misdirection they encounter from various legal aids and websites. Our Legal Chatbot aims to correct this by providing accurate and effective solutions to their legal issues. Moreover, it will prioritize user confidentiality and data protection, ensuring that people can seek advice without risking their private information.

[007] By harnessing the power of NLP and AI, the chatbot will be able to comprehend, analyze, and respond to users' inquiries in a clear and effective manner. The use of the Random Forest model, a popular and powerful machine learning algorithm, will further ensure the accuracy and efficiency of our chatbot.

[008] In conclusion, this project is about creating a more inclusive, efficient, and reliable legal service tool for the citizens of India, while prioritizing user confidentiality and data protection.

[009] Accordingly, on the basis of aforesaid facts, there remains a need in the prior art to provide a Legal Chatbot Using Natural Language Processing and method thereof. Therefore, it would be useful and desirable to have a system, method, apparatus and interfaces to meet the above-mentioned needs.

SUMMARY OF THE PRESENT INVENTION

[010] In view of the foregoing disadvantages inherent in the known types of conventional digital legal systems, methods and techniques, are now present in the prior art, the present invention provides a Legal Chatbot Using Natural Language Processing and method thereof, which has all the advantages of the prior art and none of the disadvantages.

[011] The integration of technology in the legal domain, specifically the development of legal chatbots, has been steadily growing, with notable impacts on accessibility and dissemination of legal information and services.

Kanoon Mitra, the legal chatbot project for Indian laws, represents a cutting-edge effort in this direction. The chatbot, having been trained on a massive corpus of Indian legal statutes and case law, covers various aspects of Indian laws such as the Indian Penal Code (IPC), Civil Procedural Code (CPC), Code of Criminal Procedure (CrPC), Hindu Laws, and Muslim Laws.

[012] IPC provides the basis for criminal justice, while the CPC handles the resolution of civil disputes. CrPC administers criminal justice procedures including investigation, prosecution, and trial of criminal offenses. Hindu and Muslim Laws cover personal and family matters like marriage, divorce, adoption, inheritance, and maintenance specific to Hindu and Muslim communities respectively.

[013] The chatbot aims to democratize legal information and services, making them readily available and understandable to individuals. Additionally, it assists lawyers and legal professionals by offering them a quicker and easier access to legal information, thereby enhancing the quality of legal services provided.

[014] A promising future component of the project is the "legal advisors near me" list, which aims to provide users with a simple and convenient way to find and connect with local lawyers and advocates, further improving access to legal services in India. Advanced search and filter capabilities could allow users to find advocates based on specific criteria like practice areas, location, language, and fees. Ratings and reviews from past users could also be integrated to give insights into the quality of the advocates' services, helping users make more informed choices. This could also help in improving the quality of the list by promoting high-performing advocates and removing those with poor performance. Lastly, the list could be integrated with other legal tech tools and platforms for a comprehensive and convenient legal service experience.

[015] Kanoon Mitra and its future features like the "legal advisors near me" list hold significant potential in democratizing and improving access to legal services in India.

[016] In this respect, before explaining at least one object of the invention in detail, it is to be understood that the invention is not limited in its application to the details of set of rules and to the arrangements of the various models set forth in the following description or illustrated in the drawings. The invention is capable of other objects and of being practiced and carried out in various ways, according to the need of that industry. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[017] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with

particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

5 **BRIEF DESCRIPTION OF THE DRAWINGS**

[018] When considering the following thorough explanation of the present invention, it will be easier to understand it and other objects than those mentioned above will become evident. Such description refers to the illustrations in the annex, wherein:

10 **[019] FIG. 1**, illustrates a block diagram showing various entities for a Legal Chatbot Using Natural Language Processing and method thereof, in accordance with an embodiment of the present invention.

15 **[020] FIG. 2**, illustrates a schematic diagram of the Legal Chatbot Using Natural Language Processing and method thereof, in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

20 **[021]** The following sections of this article will provide various embodiments of the current invention with references to the accompanying drawings, whereby the reference numbers utilised in the picture correspond to like elements throughout the description. However, this invention is not limited to the embodiment described here and may be embodied in several other ways. Instead, the embodiment is included to ensure that this disclosure is extensive and complete and that individuals of ordinary skill in the art are properly informed of the extent of the invention. Numerical values and ranges are given

for many parts of the implementations discussed in the following thorough discussion. These numbers and ranges are merely to be used as examples and are not meant to restrict the claims' applicability. A variety of materials are also recognised as fitting for certain aspects of the implementations. These materials should only be used as examples and are not meant to restrict the application of the innovation.

[022] Referring now to the drawings, these are illustrated in FIG. 1 & 2, the present invention discloses a Legal Chatbot Using Natural Language Processing and method thereof. This time regardless of being the period of modernization, a few local people are as yet not mindful of the laws of our country. That is the explanation certain people make a methodology nearer to the legitimate instructors with their interests with a mindset that nothing will happen on fever of them. This undertaking will make them mindful of his/her own right as a person. In the wake of having this legitimate chatbot, individuals can regularly pose their inquiries decisively and this bot will give the medicinal regulations partner it. In this way, it will be the moment arrangement of the client's uncertainty. This bot will likewise have a voice help quality for client's honour. As the greater part of individuals of our country use cell phones, in the event that any issue happens, they can ask it basically in any of the Indian local dialects and it will be completely private. Moreover, this bot will give a "legal counsellors close to you" area access office, with which individuals will be assisted by a true attorney with inclining to pick and have their further.

[023] In accordance with an embodiment of the present invention, the use case diagram, Fig 1, illustrates the functioning and workflow of the legal chatbot, Kanoon Mitra. This innovative tool integrates high-level search and

filter capabilities, user ratings, and reviews along with other legal technology platforms to create an efficient and user-friendly resource. By using these features, individuals and businesses can conveniently find and connect with local lawyers and advocates that fit their specific needs.

5 **[024]** The chatbot's operations are underpinned by advanced Natural Language Processing (NLP) and Machine Learning algorithms. These techniques enable Kanoon Mitra to understand complex legal language and offer accurate and contextually appropriate responses to users' queries. It has been trained on a vast corpus of Indian legal statutes and case law, which
10 equips it with comprehensive knowledge of various Indian laws.

[025] Its user-friendly interface facilitates accessibility for the public and aims to bridge the knowledge gap between individuals and the complex legal system. With an interface that is easy to navigate, users can effectively interact with the chatbot to find relevant legal information and make informed
15 decisions about their legal issues.

[026] Kanoon Mitra also promises affordability and convenience. The legal industry is often seen as expensive and difficult to navigate for the average citizen. This chatbot, by providing accurate legal information round-the-clock, aims to make legal services more affordable and accessible to everyone.

20 **[027]** In conclusion, the legal chatbot project for Indian laws is an important and innovative step towards improving access to legal information and services in India. The technology used in Kanoon Mitra has the potential to revolutionize the legal industry in India by making it more user-friendly, accessible, and affordable for the general public. This move is expected to

enhance the public's understanding of their legal rights and obligations, thereby empowering them to handle their legal issues more effectively.

[028] In Fig 2, The workflow of Kanoon Mitra is shown. The overall process will work in different languages with different features. The Several European countries are using automated decision-making systems for justice administration, especially for the allocation of cases to judges, e.g., in Georgia, Poland, Serbia, and Slovakia, and to other public officials, such as enforcement officers in Serbia.

[029] However, while these cases are examples of indirect automated decision-making systems, they may still significantly affect the right to a fair trial. A developing country like India needs to be more concerned while giving any judgment, here we are trying to serve the reliefs without falling into any erroneous assumptions.

[030] The above-mentioned invention is provided with the preciseness in its real-world applications to provide a Legal Chatbot Using Natural Language Processing and method thereof.

[031] It is to be understood that the above description is intended to be illustrative, and not restrictive. For example, the above-discussed embodiments may be used in combination with each other. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description.

[032] The benefits and advantages that the present invention may offer have been discussed above with reference to particular embodiments. These benefits and advantages are not to be interpreted as critical, necessary, or essential features of any or all of the embodiments, nor are they to be read as

any elements or constraints that might contribute to their occurring or becoming more evident.

[033] Although specific embodiments have been used to describe the current invention, it should be recognized that these embodiments are merely illustrative and that the invention is not limited to them. The aforementioned
5 embodiments are open to numerous alterations, additions, and improvements. These adaptations, changes, additions, and enhancements are considered to be within the purview of the invention.

We Claim:

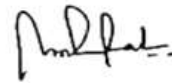
1. A system for a legal chatbot, Kanoon Mitra, comprising a method of integrating high-level search and filter capabilities, user ratings, and reviews along with other legal technology platforms to create an efficient and user-friendly resource.
5
2. The system as claimed in claim 1, where the chatbot's operations are powered by advanced Natural Language Processing (NLP) and Machine Learning algorithms.
3. The system as claimed in claim 1, where the chatbot is trained on a vast corpus
10 of Indian legal statutes and case law, providing comprehensive knowledge of various Indian laws.
4. The system as claimed in claim 1, which includes a user-friendly interface that bridges the knowledge gap between individuals and the complex legal system and allows users to effectively interact with the chatbot to find relevant legal
15 information.
5. The system as claimed in claim 1, where the chatbot provides accurate legal information round-the-clock, making legal services more affordable and accessible to everyone.
6. A method for improving access to legal information and services in India using
20 the legal chatbot system of claim 1, which has the potential to revolutionize the legal industry by making it more user-friendly, accessible, and affordable.
7. The method as claimed in claim 6, which enhances the public's understanding of their legal rights and obligations, empowering them to handle their legal issues more effectively.

8. The system as claimed in claim 1, where individuals and businesses can use the chatbot to conveniently find and connect with local lawyers and advocates that fit their specific needs.

5 Dated this 14th day of July 2023

Applicant

Brainware University, Kolkata



Registrar

Brainware University

Barasat, Kolkata- 700125

Signature:

Name: Mahua Pal

ABSTRACT

A LEGAL CHATBOT USING NATURAL LANGUAGE PROCESSING AND METHOD

THEREOF


[034] The present invention discloses a Legal Chatbot Using Natural Language
5 Processing and method thereof. The present invention pertains to the field of legal
technology, particularly to a legal chatbot system, named Kanoon Mitra. The system
integrates advanced Natural Language Processing (NLP) and Machine Learning
algorithms and utilizes a comprehensive corpus of Indian legal statutes and case law.
This design enables it to provide accurate and contextually appropriate legal
10 information to users round-the-clock. The chatbot system also includes a user-friendly
interface that bridges the knowledge gap between individuals and the complex legal
system, making it more accessible and affordable to the public. Additionally, the
system integrates high-level search and filter capabilities, user ratings, and reviews,
allowing individuals and businesses to find and connect with local lawyers and
15 advocates that fit their specific needs. This innovation represents a significant step
towards improving access to legal information and services in India and has the
potential to revolutionize the legal industry by enhancing the public's understanding of
their legal rights and obligations.

Accompanied Drawing **[FIGS. 1-2]**

20

Dated this 14th day of July 2023

Applicant
Brainware University, Kolkata



**Registrar
Brainware University
Barasat, Kolkata- 700125**

Signature:

Name: Mahua Pal


FORM 3
 THE PATENTS ACT, 1970
 (39 of 1970)
 and
 THE PATENTS RULES, 2003
STATEMENT AND UNDERTAKING UNDER SECTION
8
 (See section 8; Rule 12)

1. Name of the applicant(s).	We, Brainware University, Kolkata having office at, 398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125.
------------------------------	--

2. Name, address and nationality of the joint applicant.	<p>(i) that I/We have not made any application for the same/substantially the same invention outside India</p> <p>Or</p> <p>(ii) that I/We who have made this application No... dated alone/jointly with....., made for the same/ substantially same invention, application(s) for patent in the other countries, the particulars of which are given below:</p>
--	---

Name of the Country	Date of Application	Application No.	Status of the Application	Date of Publication	Date of grant
-	-	-	-	-	-

3. Name and address of the assignee	<p>(iii) that the rights in the application(s) has/have been assigned to none</p> <p>..... that I/We undertake that upto the date of grant of the patent by the Controller, I/We would keep him informed in writing the details regarding corresponding applications for patents filed outside India within six months from the date of filing of such application.</p> <p style="text-align: right;">Dated this 14th day of July 2023</p>
-------------------------------------	--

<p>4. To be signed by the applicant or his authorized registered patent agent.</p>	 Registrar Brainware University Barasat, Kolkata- 700125 Signature: Name: Mahua Pal
<p>5. Name of the natural person who has signed.</p>	<p>Brainware University, Kolkata Name of the Applicant</p>
	<p>To The Controller of Patents, The Patent Office, at Kolkata</p>
<p>Note.- Strike out whichever is not applicable;</p>	

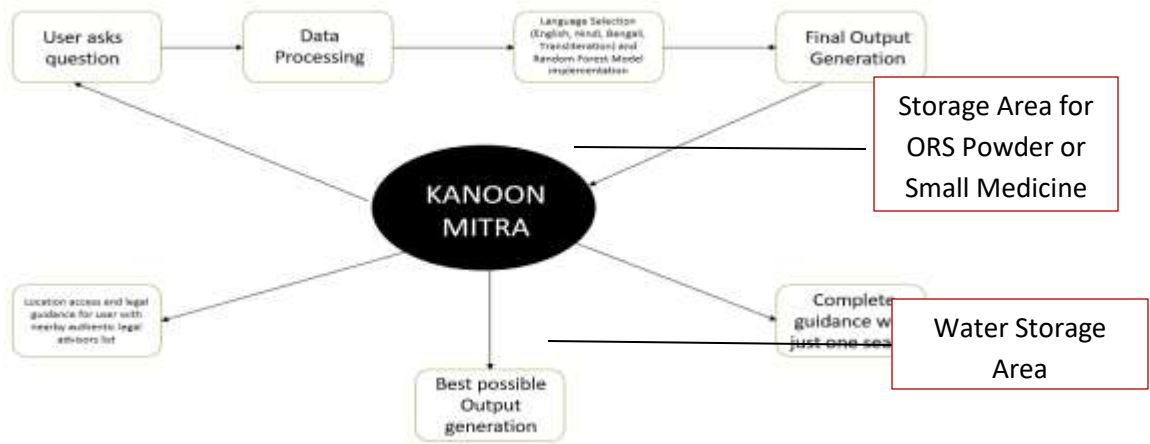


Fig 1: The Use case diagram of Kanoon Mitra

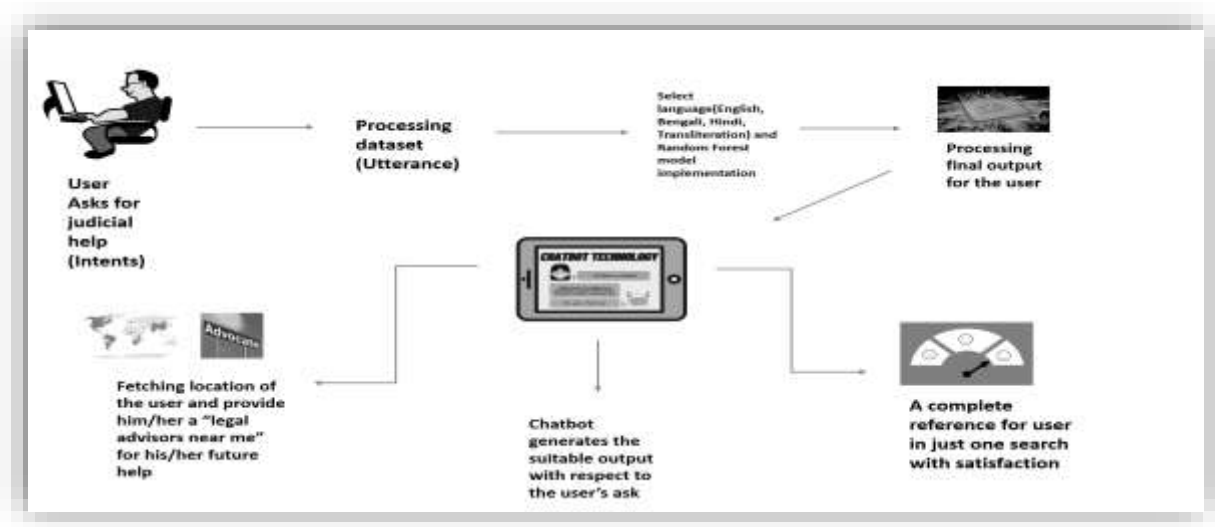


Fig 2: The Working functionality of Kanoon Mitra

Dated this 14th day of July 2023

Name: **Mahua Pal**

**Registrar
Brainware University
Barasat, Kolkata- 700125**

Signature:

Applicant Name: Brainware University, Kolkata

FORM- 5
THE PATENTS ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003
DECLARATION AS TO INVENTORSHIP
[See Section 10(6) and Rule 13(6)]

1. NAME OF THE APPLICANT(S)

We, **Brainware University, Kolkata** having office at, 398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125.

hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of my/ our application numbered _____ dated 14-07-2023 is/are

2. INVENTOR(S)

(a) NAME	(b) NATIONALITY	(c) ADDRESS
1. Gargi Chakraborty	Indian	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
2. Shiplu Das	Indian	Assistant Professor, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
3. Romit Kumar Pal	Indian	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
4. Abhishikta Bhattacharjee	Indian	Assistant Professor, English and Literary Studies, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
5. Koushik Mukhopadhyay	Indian	Assistant Professor, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
6. Tanusree Gupta	Indian	Assistant Professor, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125

7. Dr. Debductta Pal	Indian	Professor, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
8. Aritri Poddar	Indian	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
9. Debarun Joardar	Indian	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125
10. Sayan Mondal	Indian	Student, Computer Science Engineering, Brainware University, 398 Ramakrisnapur Road, Barasat, 700125

~~3. DECLARATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT(S) IN THE CONVENTION COUNTRY: -~~

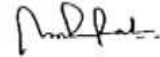
N.A.

~~We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s).~~

Dated this 12th day of July 2023

Applicant

Brainware University, Kolkata



Registrar

Brainware University

Barasat, Kolkata- 700125

Signature:

Name: Mahua Pal

To,
The Controller of Patents
The Patent Office, Kolkata

FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

I/We **Brainware University, Kolkata** hereby request for early publication of my/our [Patent Application No.]
TEMP/E-1/54645/2023-KOL

Dated **14/07/2023 00:00:00** under section 11A(2) of the Act.

Dated this(Final Payment Date):-----

Signature

Name of the signatory

To,
The Controller of Patents,
The Patent Office,
At Kolkata

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