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NyaySathi – Legal Assistant

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Abstract
NyaySathi, Legal Assistant, is a digital platform that uses AI to improve legal awareness and access to justice for everyone, especially for rural and underserved communities. Users can describe their issues in various languages, using text or voice. The platform identifies relevant legal problems and applicable laws, then suggests practical next steps. It includes a legal chatbot for quick guidance, live chat options with lawyers for personalized support, and a space for users to share community stories to encourage learning from real experiences. By combining AI, multilingual communication, and voice assistance, NyaySathi helps people understand their rights and take informed legal action with confidence.

Keywords— Legal Awareness, Legal Assistance Platform, Multilingual Support, Text- to-Speech (TTS), Community Knowledge Base, Justice Accessibility.

1. Introduction

Legal consciousness is the demand of time for the world today to bring justice and protect human rights. Yet, the majority of people in India, particularly rural folks and underprivileged people, are largely deprived of law consciousness, filing a complaint, or obtaining the correct legal advice. The majority of the citizens lack information regarding their fundamental rights, IPC articles, and legalities, which discourage them from taking timely action. With a goal of filling this gap, NyaySathi – Legal Assistant has been envisioned as a modern technology-based and accessible portal which brings legal knowledge and legal services within the reach of everyone, regardless of literacy level or geography.

NyaySathi allows the user to describe their issues in text or speech in any language they choose. It would identify the legal category automatically, look up the relevant legislations, suggest evidence to be retained, and offer clear next actions in plain language. The system also gives helpline numbers and clear step-by-step instructions such that the target group can be reached even at low literacy levels. The website includes an online chatbot to develop information on serious legal matters such as domestic violence, child labor, sexual harassment, and fundamental rights. In addition, the users can read and view real-life stories on a matter-wise and location-wise basis and develop a knowledge database of their society. For availing personalized guidance, NyaySathi also has the provision of a live chat with attorneys so that clients receive expert legal counsel for complicated or urgency matters.

Social and cultural norms in societies overall discourage persons from reporting or revealing legal

problems. Victims of domestic violence, victims of sexual harassment, or victims of child labor may not go to them for help for fear, shyness, or social boycott. NyaySathi facilitates such hardships by providing a safe, private, and unbiased platform where an individual can bring his/her concern in the open and self-enable himself/herself with his/her rights. NyaySathi explains legal processes in simple English language, instills confidence among users and allows them to voice without being socially ostracized. Based on individuals' experiences and genuine tips, it assists the users in realizing that they are not alone and helps them in the protection of their rights.

The application is coded in Python and Flask for backend execution and HTML, CSS, and JavaScript are utilized for the frontend interface. Machine learning processes like TF-IDF Vectorization with Logistic Regression or SVM are utilized for legal category tagging depending on users' information. It can also be combined with Google Translate for multi-language and gTTS (Google Text-to-Speech) for voice to make it accessible even to poor writers or readers. Data is also saved in JSON or CSV file format, and live chat with lawyers can be combined using live chats with Flask-SocketIO. The most important features of NyaySathi include voice and text input, support for multi-languages, auto-detection of law and legal category, law and evidence suggestion, and general questions chatbot interactive. The processes also include community story sharing, live legal consultancy, and text-to-speech facility for low-literacy citizens. All these together, the legal information becomes easy, comprehensible, and accessible to all.

In short, NyaySathi – Legal Assistant is a portal that unifies citizens with justice. Through artificial intelligence, machine learning, voice-guided assistance, and constant lawyer interactions, the platform enables legal awareness education and empowers individuals to act confidently. Not only making the law simpler to abide, it also accomplishes inclusivity in its multicultural and multilingual representation. Last but not least, NyaySathi will provide law education and justice to everyone, especially the marginalised and rural masses, and create a educated and just society.

2. Litrature Review

Many researchers have focused on improving access to justice through technology, but most solutions still do not reach rural and low-literate citizens. Sharma and Gupta (2023) discussed how Artificial Intelligence can modernize India's legal system by automating legal research and case analysis. However, these tools are mainly aimed at lawyers, not everyday people. The Ministry of Law and Justice (2022) pointed out that language barriers, lack of awareness, and fear often prevent citizens from seeking legal help.

Pathak and Bhattacharya (2021) suggested using mobile- based platforms to raise legal awareness in rural areas, but their model did not include multilingual and voice-based support. Improvements in Natural Language Processing (NLP) and Machine Learning (ML), such as the TF-IDF technique by Ramos (2003) and the Scikit-learn framework by Pedregosa et al. (2011), have made it possible to automatically classify user inputs into legal categories.

Recent studies by Bansal and Mehta (2022) and Joshi et al. (2022) showed that AI chatbots can provide quick legal answers and that voice interaction increases accessibility. However, they lacked real-time lawyer support and emotional understanding. The UNDP (2023) stated that AI- based digital tools can make justice more accessible if they include human guidance.

3. METHODOLOGY

Proposed Solution

NyaySathi – Legal Assistant is a multilingual web-based AI- powered platform aimed at extending legal awareness, counsel, and access to justice among people. It applies Machine Learning (TF-IDF + Logistic Regression), Natural Language Processing, Google Translation API, Text-to- Speech (gTTS), and a Legal Chatbot for delivering personalized legal services. One can articulate the problem in speech or words in one's choice of language, and the technology will sensibly process the input to identify the applicable legal category, provide evidence, and provide the subsequent steps that can be taken. Besides helping the users with guidance, NyaySathi also enables the users to learn and exchange actual-life legal experiences, debate with the Legal Chatbot for long legal debates, and communicate via live chat to authenticated lawyers for individual advice. The integration of all these modules provides a simple, informative, and empowering experience to the users.

Problem Identification

Most of the citizens, particularly rural and marginalized communities, suffer intensely in access to justice because of the lack of information about laws, language issues, fear, illiteracy, and the lack of lawyers. The citizens lack the necessary knowledge about their basic rights and the corresponding IPC sections, so it is difficult to file complaints or initiate action at the right time.Technically legal jargon and procedure also dissuade people from coming to them. NyaySathi surmounts all these issues by developing a multilingual, voice-enabled, easy-to-use

platform wherein laws become simple to comprehend, the user is assisted in understanding and lodging grievances, and is introduced to experienced lawyers if required.

Functional Requirement

It is made to take input from users as voice or text in different languages, automatically identify and categorize legal problems, and provide related laws, lines of evidence, and suggested actions. Voice outputs provide accessibility to low- literacy users. The website is also provided for users to post their own personal legal experiences anonymously so that others may be informed of these experiences and learn accordingly. An open-ended question is responded to by a Legal Chatbot with context-sensitive, human-like responses, and a live chat facility connects users with verified lawyers for individual advisory and counseling.

Technical Requirement

Component	Tools/Technologies Used
Frontend	HTML, CSS, JavaScript
Backend	Python (Flask Framework)
Machine Learning	Scikit-learn (TF-IDF, Logistic Regression)
Translation	Googletrans
Voice Output	GTTS (Google Text-to-Speech)
Database	JSON/CSV files
Live Chat	Flask-SocketIO
AI Chatbot	Gemini API Integration

Platform Design and Development

The platform consists of a collection of integrated modules that all function to provide integrated legal support. The Issue Navigator module translates user input into English, pre- processes the text, and classifies it in order to determine the relevant category of law. Describe Your Issue module allows users to enter details of their grievance, and the software will display appropriate IPC sections, suggested evidence, possible actions, helpline numbers, and other procedural guidance. Share Your Real Story and View Submitted Stories modules allow users to submit and read actual legal cases, promoting community-based awareness. The Legal Chatbot gives open- ended questions accurate, context-aware answers, while the Farmer Issue Analyzer helps farmers resolve issues and legal matters concerning land, unpaid payments, and damaged crops. The Chat with Lawyer feature facilitates direct real-time communication with authenticated legal professionals.

System Workflow

The workflow of NyaySathi starts with the user raising their issue through text or voice. The input is being translated into English, preprocessed, and labeled by the ML model to forecast the respective legal category. The system retrieves and outputs appropriate laws, evidence suggestions, recommended actions, and helpline numbers. The output is shown and read

aloud in the selected language of the user. And then users can go to the Legal Chatbot for further details, read or post real-life experiences to get more aware, or live chat with an attorney for professional guidance.

Key Highlight

NyaySathi applies ML and AI to categorize legal problems and offer automatic advice, is a multi-language model that supports voice-based interaction for low-literacy citizens, enables community learning by sharing stories, and provides instant access to legal professionals. NyaySathi bridges the gap between justice and the citizen and empowers them, particularly rural and underprivileged citizens, with information, confidence, and concrete next steps to seek justice effectively.

4. SYSTEM ARCHITECTURE

System Design and Management

NyaySathi – Legal Assistant system has been made user- friendly in approach to make legal awareness, advice, and communication as simple, inexpensive, and efficient as possible to all the users. The system is modular, flexible, scalable, and maintainable. The system has been split into three broad layers:

- Frontend Layer: Built using HTML, CSS, and JavaScript, this layer is an end-user-friendly, interactive interface whereby users can input their legal queries through text or speech, select categories, or interact with the legal assistant.
- Backend Layer: Built using the Flask framework in Python, this layer processes user input, performs data processing using machine learning models, performs translations, and provides outputs to the frontend.
- Database and API Layer: Utilizing JSON and embedded APIs, i.e., Google Translator API and gTTS, to carry out safe data exchange, multilingual support, and voice response.

System administration deals with hiding data, securely storing user data, and providing multilingual support to serve various languages of users. Layering here helps NyaySathi to provide quick, precise, and user-friendly legal service without becoming unscalable in the future.

Implemented Modules

NyaySathi system contains a plethora of integrated modules, each of which caters to different users' requirements and supports global flow of the platform:

1. Issue Navigator: The main module handles the grievances entered via text mode or voice mode initiated by the users. It employs translation, pre-processing of text, and classification using machine learning in order to automatically determine the correct legal category and guide the users to make the right decision of law domain even if they don't know legal terminologies.
2. Describe Your Issue: Enables the user to input his or her name, choose his or her desired language, and narrate his or

her problem. The input is taken by the system, analyzed, and displays resolved legal category, applicable IPC sections, suggestions on evidence, suggested action, and helpline numbers for prompt assistance.

3. Share Your True Story: Enables users to post personal legal experience for learning and awareness by the community. Stories are tagged with details such as location, time, and type of issue, and stored safely to preserve the privacy of the users.
4. View Shared Stories: Displays all contributed stories, categorized by legal issue and location. The module promotes solidarity, awareness, and engagement between users sharing similar issues.
5. Legal Chatbot: An AI module of the system to offer open-ended legal questions. It offers conversational, context-specific advice, helping individuals to understand complex legal terminology and procedures in simple terms.
6. Farmer Issue Analyzer: A module with sole expertise in resolving agrarian and land issues. It gives farmers proper legal remedies, procedures followed in securing necessary evidence, and the local authorities to approach, thereby empowering rural masses with actionable legal know-how.
7. Chat with Lawyer: Offers real-time interaction of the citizens with enrolled lawyers with the help of Flask-SocketIO. The module offers personalized legal advice, what-to-do-next tips, and document preparation assistance, bridging citizens with well-experienced legal counsel.

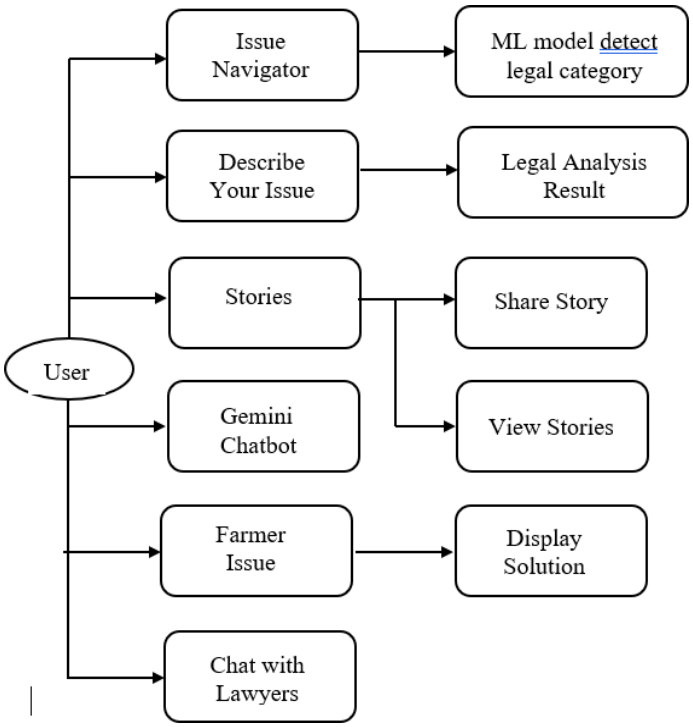


Fig. Block Diagram of NyaySathi

2. Use

1. User Input (Voice / Text in any Indian Language) User Input

Purpose: Initial step where user is communicating with the system. Explanation:
User can input anything either in type or voice whatever he wanted to inquire.

Input of any Indian language (Hindi, English, Marathi, etc.).
Example: "I am victim of domestic harassment" or "मुझे संपत्ति त्तिताादके मTमले में मदद चTत्तिए."

2. Language Translation (Google Translate API)
- Objective: System to multilingual supported.
- Description:

User input to standard processing language, i.e., English translation.
nopga Google Translate API employs.
Support local language input and translate by analyze.

Data:
Text generated with:
 Tillersons
Lists of law to be followed.
Actionable content something user can act upon. Helpline numbers or legal aid numbers.
Improve readability and conciseness of response. Example: "Complain under IPC 498A. Call 181."

7. Voice Output (Speech Synthesis from Text) (gTTS)
- Use: Speaks out the answer in words.

ेInput: "मुझे संपत्ति त्तिताादक िलए मदद चTत्तिए"

Operations:

Output: "I need help for a property dispute."

3. Text Preprocessing Module (Tokenization, Cleaning)
- Purpose: Text for machine learning classification.
- Requirements:

Tokenization: Word/words to sentences/tokens tokenization. o Cleaning: remove punctuation chars, stop words, and
unwanted chars.
Normalized text for ML model.
Example Matrix: "Need help with a property issue" → ["need", "help", "property", "issue"].

4. Machine Learning Model (TF-IDF + Logistic Regression or SVM for Legal Category)
- Purpose: Legal categories of suitability for user query.
- Description:
  - o TF-IDF (Term Frequency–Inverse Document Frequency): Text normalized to numerical feature vectors word salience maintained.
  - o Classifier Options

❑ Logistic Regression: Definition of easily definable best fit boundary.
❑ SVM (Support Vector Machine): Suited complex boundaries, most appropriate for extremely small or class- similar data sets.

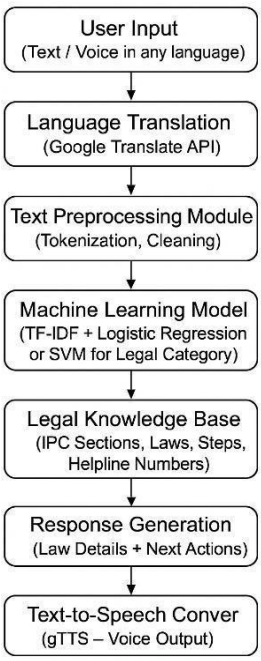
no Output: Select type of law, i.e., Domestic Violence, Child Labor, Property Dispute.
no Example: "I am subjected to domestic harassment" → Type: Dormestic Violence.

5. Legal Knowledge Base (IPC Sections, Laws, Steps, Helpline Numbers)
- Purpose: Systematic storage of legal knowledge to refer to.
- Details

IPC sections, law to be applied, legal process, helpline numbers.
Facilitates generation of proper, template counselling for victim class.
.Domestic Violence → IPC Section 498A, registration of complaint, helpline no. 181.

6. Generation of Response (Law Details + Next Steps)
- Function: Converts input forms to action-shelf legal counselling.
- uses Google Text-to-Speech (gTTS) platform as first step of voice response.

uses voice response language list. ease non-readers and resistant readers.
Example: SMS → As spoken: "You can complain against IPC 498A. Call 181."



5. CONCLUSION

NyaySathi – Legal Assistant has been successfully employed as an online integrated portal to disseminate legal awareness and enable access to justice to all the citizens in bulk with specific emphasis on poor, rural, and marginalised sections. The platform is able to counter the disadvantage of those who lack information about their legal rights or are not able to visit the relevant kind of legal counsel due to the language problem, illiteracy, social shame, or economic disadvantages.

Key Points of NyaySathi:

1. Easy Legal Advice for Knowledge

It offers its users the ease of narrating their problems in voice or text, according to their own choice, so that it is brought within the reach of a large number of users.to

It has a wise selection of the appropriate legal category, searching and retrieval of relevant laws, evidences to be

preserved with suggestions, and further steps in easy language, encouraging users to make wise decisions without ambiguity.

2. Accessibility and Inclusivity

o\Multilingual capability allows users from different geographical locations and languages to use NyaySathi confidently.

<Text-to-Speech (TTS) provides a potential for low- literacy or visually impaired users to listen to legal counsel, bridging the poor reader and writer gap.

3. Interactive Features:

A chatbot AI responds to queries relating to domestic violence, child labor, sexual harassment, and fundamental rights, and offers real-time assistance and elucidation in easy language.

o/Users learn and read actual-experience, location-based and categorized, to establish a people-owned repository and support learning from others and issue reporting.

Live chat with experienced attorneys enables users to seek personalized legal advice for serious or urgent issues.

4. Empowerment and Community Impact

NyaySathi serves as a portal to the justice system for citizens, enabling users to access learning and the tools to exercise legal rights confidently.

By providing actionable guidance, helpline numbers, study materials, and support centers, the platform fills voids that otherwise discourage individuals from claiming justice.

The platform generates an impression of social support and connectivity under which individuals are assured to share legal complaints and seek help at all times.

NyaySathi is evidence of technology being an excellent platform for social empowerment. With the addition of multilingual support, voice interface, machine learning, and interactivity, the platform not only educates people about their rights according to law but also leads them through the process of how to claim these rights. The project reiterates the importance of legal knowledge making its way to become accessible, actionable, and inclusive so that marginalized community citizens and people from rural areas are able to use their rights and obtain justice without harassment or hassleNyaySathi is a feasible proposition to bridge the gap between citizens and the justice system, empowering them and creating a positive social impact in communities.

6. FUTURE SCOPE

The NyaySathi – Legal Assistant system has tremendous scope for future developments to enhance accessibility, efficiency, and comprehensiveness of legal assistance. The platform can be made to include more legal categories like cybercrime, financial fraud, labor disputes, and civil cases to provide a wider range of assistance to citizens. The integration of state-of-the-art Natural Language Processing models, such as BERT or GPT-based classifiers, can improve the system's capability of interpreting complex, ambiguous, or context- dependent user statements, thus increasing the accuracy of legal category identification and advice. Voice and mobile support may be enhanced further by introducing more precise speech-to-text translation for local dialects and creating a mobile app with offline functionality, enhancing accessibility of the platform to rural users with low levels of internet connectivity. In addition, NyaySathi may be integrated with NGOs, legal aid cells, and government helplines for quick assistance and practicable legal help. In order to provide security and authenticity, blockchain technology can be implemented in storing voice recordings, documents, and uploaded evidence in tamper-proof mode appropriate for legal hearings. All these upgrades will increase the outreach of NyaySathi, enhance user experience, and make it a trustworthy and thorough digital legal assistant for citizens throughout India.

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