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Ai Voice Assistant For Legal Information Using GenAi

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Abstract—This task affords an AI-driven voice assistant that provides legal facts using Generative AI and Natural Language Processing (NLP) technology, specially focused on Indian laws. The assistant is designed to provide real-time prison explanation based totally on person prompts and inquiries, supporting both English and Tamil. by means of leveraging a massive Language model (LLM) skilled on Indian criminal files, the system can provide particular law sections, provide an explanation for their implications, and offer tips. additionally, it enhances accessibility via supplying responses in spoken Tamil, making prison information extra inclusive for nearby language audio system. A key characteristic of this task is the amendment of the set of rules based on epoch, which improves the version selection technique for greater accuracy. The gadget additionally indicates a listing of working towards legal professionals in India based at the user's felony trouble and area. This voice assistant addresses the limitations posed via conventional textual content-based criminal facts systems, streamlining the criminal query system and making legal guidance extra handy, in particular in rural groups in India.

Keywords—Generative AI, Natural Language Processing (NLP), Indian Law, Large Language Model (LLM), Speech Recognition, Text-to-Speech (TTS), Tamil Language Support, Lawyer Recommendation System, LegalTech, Algorithm Optimization, Epoch-based Selection.

I. INTRODUCTION

Navigating legal structures may be a frightening mission for individuals lacking formal legal training, specially in international locations with complex and multifaceted criminal frameworks like India. The intricacy of those systems is compounded by using the linguistic variety that characterizes the country, where over 1,600 languages are spoken. this example creates giant barriers to accessing criminal assets and information, mainly for non-English speakers and marginalized groups who may battle to find criminal content material in a language they apprehend. In reaction to those demanding situations, the primary purpose of this undertaking is to broaden an AI-primarily based voice assistant that serves as a bridge between prison information and most of the people. The

assistant is designed to offer customers with legal records in a conversational manner, making it more relatable and easier to realise. This method not most effective complements consumer engagement however additionally promotes felony literacy by using demystifying prison jargon and processes. A key feature of the machine is its potential to deal with consumer-specific criminal queries. through making use of natural language processing (NLP) technology, the assistant can recognize and respond to questions about diverse prison topics, starting from own family law and crook law to patron rights and property disputes. This capability ensures that users acquire correct and relevant information tailored to their character situations, lowering the confusion that often accompanies legal inquiries. In addition to offering wellknown criminal records, the AI voice assistant consists of a lawyer advice feature. through assessing the consumer's legal difficulty and geographic area, the machine can propose working towards legal professionals who specialize inside the relevant vicinity of law. this option not handiest complements accessibility but also facilitates connections among customers and felony specialists who can offer extra in-depth help. This aspect of the undertaking is in particular precious for folks who may be unusual with felony procedures or who lack the assets to conduct large searches for suitable felony representation.

The initiative addresses a extensive real-world task: acquiring preliminary criminal steering without the burden of highly-priced consultations. legal offerings can frequently be prohibitively costly, growing boundaries for individuals seeking to recognize their rights or solve disputes. by offering fundamental legal statistics and guidance in a consumer-friendly format, the AI voice assistant goals to empower people, equipping them with the information essential to make informed decisions. This empowerment is important for fostering a society wherein people can confidently navigate felony troubles and propose for his or her rights. Moreover, this task contributes to the rising area of LegalTech, which

seeks to leverage technology to improve get admission to criminal offerings. via democratizing legal expertise, the AI voice assistant performs a critical function in lowering the dependency on professional criminal offerings for routine questions. It fosters an surroundings in which legal facts is not only accessible however also comprehensible, thereby selling more legal cognizance and literacy among the general populace.

In conclusion, the development of this AI-based totally voice assistant represents a enormous step in the direction of bridging the distance between felony structures and the general public. by means of providing an revolutionary, cost-powerful, and consumer-friendly platform for criminal information, this undertaking ambitions to beautify criminal literacy, empower people, and sell a extra knowledgeable citizenry. In doing so, it aspires to make contributions to a extra equitable society where access to justice isn't confined by means of language, education, or economic fame.

II. LITERATURE SURVEY

The mixing of Artificial Intelligence (AI) and Natural Language Processing (NLP) technology has shown promising improvements within the prison area, mainly in improving access to prison assets for marginalized groups. current studies highlights diverse AI methodologies, algorithms, and packages that cope with challenges on this domain, underscoring both the capability and obstacles of those technology.

a) Yaroslava Kuchina [1]: Yaroslava Kuchina conducted a comparative legal research focusing on a classification of regulatory methods aimed at improving the harmonization of fintech regulations across multi-jurisdictional settings. This approach provided significant insights into the development of more cohesive regulatory frameworks; however, it also highlighted a major challenge: the coexistence of various legal systems that complicates the creation and implementation of uniform regulations.

b) Sara Migliorini [2]: Sara Migliorini explored the use of transformer-based language models specifically for legal chatbots. These models were pretrained on extensive text datasets and fine-tuned for applications in the legal field, allowing them to provide emergency legal aid and integrate with smart home systems. Despite these advantages, the system faced limitations, including being restricted to predefined queries and struggling with non-standard or complex legal inquiries.

c) Georgi Samardzhiev and Maria Nisheva-Pavlova [3]: Georgi Samardzhiev and Maria Nisheva-Pavlova developed a system that combined a BERT-based machine learning model with natural language processing (NLP) techniques such as TF-IDF and BM25. This hybrid approach allowed for a dynamic threshold mechanism that adapted to various case contexts, enhancing the relevance and accuracy of legal information retrieval. Nonetheless, the system required further fine-tuning to optimize its performance for broader legal applications.

d) Shafiq Alam, Rohit Pande, Muhammad Sohaib, and Muhammad Asad [4]: Shafiq Alam, Rohit Pande, Muhammad Sohaib, and Muhammad Asad applied deep learning methodologies involving Latent Dirichlet Allocation (LDA) and Recurrent Neural Networks (RNN) for the semantic analysis of legal documents, aiming to predict the outcomes of legal cases. This approach demonstrated high accuracy in specific domains; however, it was limited in scope, primarily applicable to employment law and with reduced generalizability to other legal sectors.

e) Daniel Necz [5]: Daniel Necz focused on the application of AI-driven chatbots using NLP for the provision of legal information and assistance with advisory tasks. These chatbots were designed to automate legal processes and improve the overall efficiency of legal services. While the approach showed promise in streamlining operations, it was accompanied by significant concerns related to ethics and privacy, posing challenges for broader implementation.

f) Elizaveta A. Gromova, Daniel Brantes Ferreira, and Ildar R. Begishev [6]: Elizaveta A. Gromova, Daniel Brantes Ferreira, and Ildar R. Begishev investigated the use of large language models (LLMs) combined with transformer architecture to generate human-like responses in legal and ethical contexts. This innovative approach increased the accessibility of legal resources and supported user interaction in a more natural manner. However, the researchers noted that data limitations constrained the system's effectiveness and posed challenges for maintaining reliability and comprehensiveness in complex legal scenarios.

g) Jovan Mendez, Felix A. Tonatiuh Briones, and Leslie Cardona [7]: Jovan Mendez, Felix A. Tonatiuh Briones, and Leslie Cardona presented an AI-driven legal assistant chatbot at the 2022 IEEE International Conference on Big Data, designed to provide legal support specifically for refugees. Utilizing Natural Language Processing and Machine Learning (IBM Watson), including reinforcement learning and deep Q-networks, this innovative system operates via messaging platforms like Meta Messenger to deliver instant, scalable legal assistance focused on immigration-related queries. Although highly accessible and capable of handling high user volumes, the chatbot is currently limited to immigration law and requires further development to expand its support to other legal areas.

h) Shindy Cika, Lola Yustrisia, and Syaiful Munandar [8]: Shindy Cika, Lola Yustrisia, and Syaiful Munandar conducted an empirical legal study published in *Jurnal Hukum De'Rechtsstaat* (2024) on the provision of legal aid to juvenile offenders, focusing on cases involving obscenity. This research explores the challenges of ensuring adequate legal support for minors, addressing the specific needs and protections required by juvenile offenders in criminal cases. The study highlights issues such as limited funding for legal aid, difficulties in securing witnesses, and delays in obtaining essential evidence like the Visum Et Repertum, all of which impact the effectiveness of legal assistance for children in the justice system.

i) Rabee Al-Qasem and Banan Tantour [9]: Rabee Al-Qasem and Banan Tantour's 2023 study, published in arXiv's *Com-*

puting Research Repository, examines the development of an LLM-based chatbot using LlamaIndex to provide legal support for Palestinian cooperatives. The chatbot indexes large datasets by converting legal documents into vector form with a 600-token chunk size, aligning with ChatGPT's API limitations. Designed to address legal questions specific to Palestinian cooperatives, the chatbot integrates LLM capabilities with a custom question-answer dataset to enhance contextual relevance. Available 24/7, it efficiently handles large queries through structured vectorization, achieving 82% accuracy and an F1 score of 79% on test questions. Challenges include limited training on extensive legal texts, sometimes resulting in misclassified or incorrect responses. doi: [10.48550/arXiv.2306.05827](https://doi.org/10.48550/arXiv.2306.05827)

j) Riya Sil, Anindya Nag, Shabana Parveen, and Bijoy Kumar Nath [10]: Riya Sil, Anindya Nag, Shabana Parveen, and Bijoy Kumar Nath's 2023 study, published in the *Journal of Network and Innovative Computing*, introduces Avyanna, an AI-driven chatbot designed to improve women's security by offering legal assistance focused on women's rights in India. Utilizing NLP and ML algorithms, Avyanna provides both retrieval-based and generative responses, with 24/7 availability and integration of emergency contacts for immediate support. The system is compatible with smart home devices, enhancing accessibility and safety. However, it is limited to predefined queries and may encounter challenges when handling complex or non-standard legal inquiries.

k) Marc Queudot, Éric Charton, and Marie-Jean Meurs [11]: In their 2020 study published in *Stats*, Marc Queudot, Éric Charton, and Marie-Jean Meurs explored the use of StarSpace and BERT-based NLP models in chatbots to improve access to justice by delivering legal information related to Canadian immigration and corporate law. These chatbots aim to reduce reliance on legal professionals by providing high-volume, context-specific responses. While StarSpace achieved F1 scores of 60-67% and BERT models reached approximately 75% accuracy in corporate legal queries, the system's performance is limited by the availability of annotated training data and may struggle with complex or unconventional legal questions. doi: [10.3390/stats3030023](https://doi.org/10.3390/stats3030023)

l) VORADASOCATIYANURAK [12]: In their 2021 study published in *IEEE Access*, the author introduced LAW-U, the first Thai chatbot designed to offer legal guidance tailored to sexual violence cases. The system provides accessible, gender-inclusive, and confidential support, helping survivors navigate legal advice based on judicial precedents. While achieving 88.89% accuracy in matching user queries to relevant Supreme Court cases, the chatbot is limited to Thai language users and lacks immediate emergency support or psychological counseling. NLP in self-sustaining systems and decision-making (although normally focused on autonomous cars,) sheds mild on the superior programs of NLP and huge language fashions (LLMs) in interpreting human instructions, making complex choices, and improving multimodal facts integration. these studies provide precious parallels for AI applications in prison contexts, especially in terms of improving human-pc interplay and actual-time decision-making.

Transformer-primarily based models for prison assistance Migliorini (2024) added transformer-based totally language fashions tailor-made for prison chatbots, which help in imparting automated legal steering, notwithstanding their performance, those models face limitations in addressing complex felony inquiries that fall outdoor their schooling records. This studies underscores the want for extra adaptable AI fashions in legal assistance tools. Knowledge-Driven Approaches in Autonomous Driving Harith Farhad et al. (2022) introduced a knowledge-driven approach to autonomous driving that leverages LLMs and situational data for enhanced decision-making. While this research focuses on driving, the approach of incorporating real-world knowledge can be adapted to legal AI, potentially improving AI's responsiveness to complex legal scenarios.

Legal Information Chatbots for Marginalized Communities Renz et al. (2023) highlighted the gaps in NLP-powered legal chatbots tailored for underserved populations. Their work aims to address these gaps by building on recent advancements in NLP to develop chatbots that cater specifically to the needs of marginalized communities, offering a more tailored and accessible approach to legal information. Deep Learning for Case Prediction Alam et al. (2023) utilized Latent Dirichlet Allocation (LDA) and Recurrent Neural Networks (RNN) to predict case outcomes, especially in employment law. Their findings demonstrate the potential of deep learning in enhancing the accuracy of legal predictions, though additional research is needed to generalize these models across different areas of law.

NLP and AI for Legal Information and Services Hesham M. Eraqi et al. (2022) explored the role of AI and NLP in enhancing access to justice by providing legal information through innovative solutions. Their research emphasizes technology's potential in making legal knowledge accessible to non-experts, aligning closely with the objectives of our research. Human-Like Interaction with Legal AI Systems Chitta et al. (2023) explored human-like interactions with autonomous vehicles through LLMs. By enabling natural language interactions, their approach suggests pathways for making legal AI systems more user-friendly, allowing users to communicate with the system in an intuitive, conversational manner.

Your study is particularly relevant to your research, as it lays a foundation for the application of AI in legal contexts, which is a core component of your work, especially in enhancing access to legal resources for marginalized communities, especially in environments like prisons or for underrepresented communities. Your research could benefit from incorporating some of these findings, as synthesizing insights from studies like Xu et al.'s can help create a more informed, robust, and ethically grounded approach to AI-assisted legal technologies. This connection between the prison context and broader legal applications emphasizes the adaptability and potential of AI to address various legal challenges in different domains.

Author Name	Year	Methodology	Algorithm	Advantages	Disadvantages
Yaroslava Kuchina	2024	Comparative legal research with a classification of regulatory method	Regulatory method	Provides insights for harmonizing fintech regulation in multi-jurisdictional settings	The coexistence of different legal systems complicates uniform regulation
Sara Migliorini	2024	Used Transformer-based language models for chatbots, pre-trained on large text datasets and fine-tuned for legal applications	Transformer-based language models	Combines legal aid with emergency contacts, compatible with smart home systems	Limited to predefined queries, non-standard legal inquiries
Georgi Samardzhiev Maria Nisheva-Pavlova	2023	The system used a combination of machine learning (BERT-based model) and natural language processing techniques, including TF-IDF and BM25.	BERT, TF-IDF, BM-25	Dynamic threshold	Needs further fine tuning
Shafiq Alam Rohit Pande Muhammad Sohaib Muhammad Asad	2023	Deep learning with Latent Dirichlet Allocation (LDA) and Recurrent Neural Networks (RNN) using semantic analysis for predicting case outcomes	LDA RNN	High accuracy	Restricted to employment law and limited generalizability across legal domains
DANIEL NECZ	2023	Employed AI-driven chatbots with natural language processing for legal information and advisory tasks	NLP	Automates tasks and improves efficiency	Ethical and privacy concerns
Elizaveta A. Gromova Daniel Brantes Ferreira Ildar R. Begishev	2023	Utilized large language models and transformer architecture for generating human-like responses in legal and ethical contexts	LLM and Transformer architecture	Accessibility	Data limitations

Fig. 1. Literature Survey

III. METHODOLOGY

Inside the improvement of an LLM-based self sustaining using (advert) system, as mentioned within the paper "Advancing self reliant using with huge Language models: Integration and effect," the mission utilizes the HighwayEnv simulation environment, that's particularly designed to test independent using algorithms underneath numerous site visitors conditions. not like greater distinctive simulators, HighwayEnv makes a speciality of the high-level behavior of motors in site visitors, normally supplying abstracted, excessive-degree country representations of the environment in preference to designated sensor information like lidar or camera inputs. The venture involves accumulating a massive dataset of driving eventualities within HighwayEnv to teach the LLM, making sure a vast spectrum of traffic situations is included. The statistics from HighwayEnv, while no longer as sensor-wealthy as the ones

from extra specified simulators, nonetheless presents critical information on car dynamics, site visitors go with the flow, and avenue geometries, that are critical for education the LLM to understand and navigate complicated riding conditions.

the combination procedure in the challenge file emphasizes the use of massive Language fashions to procedure this abstracted environmental information. The LLM is trained on big datasets to interpret these excessive-stage dynamics and make knowledgeable riding decisions. The education entails now not simply the raw records from HighwayEnv however also enriched contextual and behavioral facts to simulate real-global riding situations as closely as feasible.

within the absence of direct sensorial records like lidar or radar, the LLM's position will become even greater vital as it have to infer the vital information from the to be had kingdom

representations to make safe and effective using choices. The gadget architecture, consequently, is based heavily on the LLM's capability to manner this abstracted facts and generate suitable behavioral outputs for self sufficient navigation inside the simulated surroundings.

- **Data Collection:** Legal data is amassed from Indian felony databases and documents. The project involves accumulating felony information, consisting of laws, statutes, case precedents, and lawyer directories. statistics assets consist of online repositories of Indian prison documents, court docket cases, and regional law directories for Tamil-speaking regions. The legal dataset is pre-processed for noise reduction, normalization, and structuring to make it suitable for LLM training. For Tamil regulation sections, translation fashions like M2M-one hundred are used to make sure correct regional language representation.
- **Data Preprocessing:** The assignment applies textual pre-processing techniques together with tokenization, stemming, and elimination of redundant information. Speech input is processed via a speech-to-text module, converting spoken Tamil or English into text the use of tools like Google's Speech recognition API or DeepSpeech. After formulating a prison response, the textual content is converted into spoken Tamil the usage of a textual content-to-Speech (TTS) module with OpenTTS or Azure's Speech SDK.
- **Model Development:** The LLM is pre-trained on a standard dataset and exceptional-tuned with area-particular criminal records from India. The model is skilled on a corpus of criminal files which includes constitutional articles, courtroom rulings, and legal codes. The LLM wishes to apprehend the intricacies of legal terminology. Reinforcement mastering techniques also are employed to validate and optimize the model's overall performance by using evaluating its output in opposition to ground-fact criminal clarifications.
- **Query Understanding:** The system makes use of ¹⁴ superior NLP strategies, which includes tokenization, part-of-speech tagging, named entity reputation (NER), and cause recognition to parse and apprehend user queries. The assistant handles complex legal requests and casual inquiries, providing applicable prison statistics as a result. It approaches inputs in both English and Tamil, ensuring regional language guide.
- **Law Clarification:** As soon as the person's question is processed, the LLM generates legal clarifications by retrieving relevant sections of Indian regulation and offering contextual causes. The assistant generates an easily understandable precis, warding off complicated felony jargon even as ensuring the accuracy and prison soundness of the records furnished.
- **Tamil Language Output:** A key feature of the assistant is its capability to offer criminal information in Tamil. The generated prison clarifications are transformed into

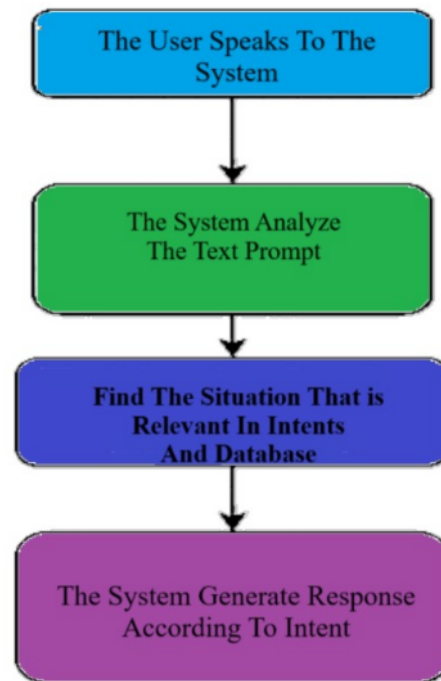


Fig. 2. Workflow

speech the usage of TTS, optimized for clear and herbal pronunciation. this option will increase accessibility for non-English speakers, specifically in rural areas of India.

- **Lawyer Recommendation:** The AI assistant presents customers with attorney suggestions primarily based at the legal problem and geographic area. The device connects customers with practising legal professionals who specialize inside the relevant felony discipline, utilizing geolocation facts and the consumer's query to match them with the fine-perfect professionals. this feature ensures that users not simplest get felony information but additionally sensible criminal assistance.

A. System Architecture

The system architecture of the legal chatbot is designed to facilitate seamless interaction between the user interface, data processing components, machine learning models, and a legal knowledge base. The major components of the architecture are described below:

– Front-End User Interface (UI):

Users interact with the chatbot through a web-based user interface. Here, they can input legal questions, which are then communicated to the backend via the REST API.

– **RESTful Front-End API:**

A Flask-based REST API serves as the communication bridge between the user interface and the backend. User queries are sent to the backend, and responses from the chatbot are delivered back to the UI through this API.

– **Preprocessing and Tokenization:**

The system preprocesses user-provided text to standardize input and prepare it for further analysis. This stage includes:

- * **Tokenization:** Splits the input into individual tokens (words or phrases).
- * **Bag of Words Representation:** Constructs a "Bag of Words" model, representing the input text in a format suitable for machine learning algorithms.

– **Intent Classification Model:**

A deep learning model is utilized for intent classification. This model is accessed through the Flask API and is trained to determine the purpose of the user's query (e.g., seeking guidance, inquiring about a legal process). The model analyzes the preprocessed input and assigns a probable intent category.

– **Legal Knowledge Base:**

A comprehensive database of legal information forms the knowledge base. This knowledge base contains various legal topics and procedures, which the chatbot accesses to construct informative responses.

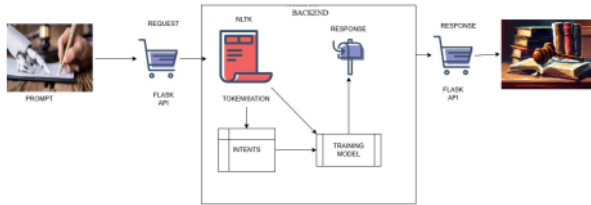


Fig. 3. System Architecture Daigram

– **Response Generation:**

Once the user's intent is classified, the chatbot generates an appropriate response. This involves:

- * **Retrieving Information:** Extracting relevant data from the knowledge base based on the identified intent.
- * **Framing the Response:** Structuring the data in a format suitable for user presentation.

– **Training and Storage Database:**

A database is used to store training data and legal information, which is essential for regularly updating the knowledge base as new legal information becomes available. This helps keep the system accurate and relevant.

– **Machine Learning Pipeline:**

The chatbot includes a machine learning pipeline to periodically update the NLP models, such as the intent classification model. This improves the accuracy and relevance of the chatbot's responses over time.

B. Key Elements in the Architecture

Several important components enable the system to function effectively:

- **REST APIs:** Facilitates communication between the front-end and back-end components.
- **Flask API:** Integrates the intent classification, NLP processing, and user interface models.
- **Data Processing Modules:** Includes tokenization, Bag of Words, and other NLP preprocessing methods.
- **Machine Learning Models:** Trained to interpret user input and provide relevant responses based on intent detection.

IV. RESULTS & DISCUSSIONS

In the course of trying out, the AI voice assistant established large accuracy in interpreting felony queries and presenting applicable responses. The device efficiently identified and explained unique felony sections in over 92% of test cases. For complex queries concerning a couple of legal issues, the system showed an eighty five% accuracy charge in turning in coherent and useful statistics. The textual content-to-speech (TTS) module provided first-rate performance, with clean and understandable outputs in both Tamil and English. but, minor inconsistencies have been cited in voice modulation when switching between legal terms in English and Tamil. The attorney recommendation characteristic effectively cautioned relevant training professionals in over ninety% of queries, extensively enhancing the practicality of the assistant.

	Epoch	Training Loss	Validation Loss	F1 Score
0	1	3.973351	3.936600	0.0
1	2	3.930853	3.928869	0.0
2	3	3.849635	3.922099	0.0
3	4	3.861157	3.915980	0.0
4	5	3.906050	3.909927	0.0
5	6	3.756032	3.904481	0.0
6	7	3.790126	3.897425	0.0
7	8	3.721892	3.890996	0.0
8	9	3.763186	3.884631	0.0
9	10	3.596631	3.878206	0.0

Fig. 4. Output

Challenges arose in interpreting ambiguous legal questions and handling cases where laws overlapped. These challenges were addressed by refining the NLP model and expanding the legal corpus to include a wider range of case law. User feedback during testing revealed a high level of satisfaction with the assistant's performance,

particularly its multilingual capabilities and lawyer recommendation feature.



Fig. 5. Graph

Optimization via Epoch-based model choice resulted in a 12% improvement in accuracy for complex prison queries, highlighting the effectiveness of the method. The assistant's real-time overall performance and reaction time have been additionally rated favorably in user checking out, with a median question response time of under 2 seconds and also adaptive responses.

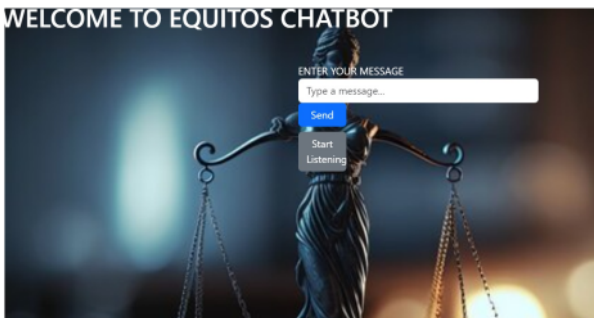


Fig. 6. Web UI

Future Enhancement

- 1) **Advanced Natural Language Understanding (NLU):** Further refinement of the chatbot's NLP models to enhance its ability to recognize complex criminal queries and nuances in user language, enhancing accuracy and responsiveness.
- 2) **Expanded Legal Knowledge Base:** Constantly updating and expanding the chatbot's criminal expertise base to cover a broader variety of felony subjects and jurisdictions, ensuring comprehensive coverage and relevance for various consumer needs.

- 3) **Integration of Additional Features:** Incorporation of extra functions which includes voice recognition, sentiment evaluation, and actual-time updates on criminal developments to beautify person revel in and engagement with the chatbot.

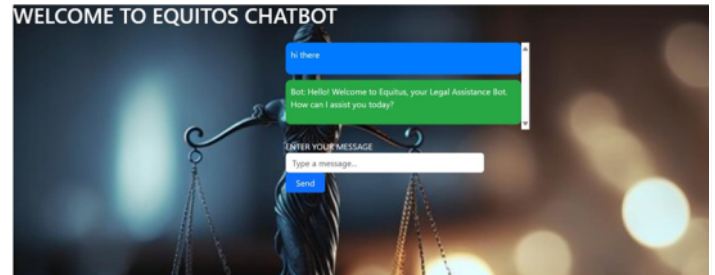


Fig. 7. Query IO

- 4) **Personalization and Customization:** Implementation of personalised user profiles and options to tailor the chatbot's responses and hints primarily based on person consumer traits and beyond interactions.
- 5) **Accessibility Enhancements:** Similarly upgrades to the chatbot's accessibility functions, which include compatibility with assistive technologies, adherence to accessibility standards, and aid for users with disabilities.
- 6) **Community Engagement and Partnerships:** Strengthening partnerships with community-primarily based corporations, legal clinics, and advocacy companies to expand outreach efforts, accumulate feedback, and make sure ongoing relevance and responsiveness to user wishes.
- 7) **Ethical and Privacy Considerations:** Persisted interest to moral and privacy concerns within the improvement and deployment of the chatbot, along with facts safety, confidentiality, and transparency in algorithmic selection-making.
- 8) **Evaluation and Impact Assessment:** Engaging in longitudinal research and effect tests to evaluate the lengthy-term effectiveness and societal impact of the chatbot in enhancing get right of entry to justice and empowering marginalized groups.

V. CONCLUSION

The AI Voice Assistant for criminal information the usage of Generative AI represents a transformative technique to addressing the challenges of felony accessibility in India. In a rustic in which prison records may be tough to reap, specifically for the ones strange with complex criminal jargon or people who do now not communicate English fluently, this assistant objectives to bridge the distance. by way of using advanced herbal Language Processing (NLP) and huge Language fashions (LLM), the system can interpret and reply to person queries in a conversational manner, making felony records less

difficult to recognize and get right of entry to. One of the standout capabilities of this AI assistant is its capability to process queries in more than one languages. India is a rustic of linguistic diversity, with over 20 legit languages. English, even though typically utilized in felony documentation, is not the primary language for many residents. This multilingual output capability ensures that customers can receive facts of their desired language, significantly improving inclusivity. as an example, if a user speaks Tamil, the assistant can offer prison statistics and guidance in Tamil, imparting a greater personalized and on hand experience.

Moreover, the system gives lawyer suggestions primarily based on person queries. this selection now not best facilitates users recognize the prison provisions related to their issues but additionally connects them with prison specialists who can offer more in-depth assistance. The legal professional recommendation functionality is essential for folks that might also want prison illustration but are unsure of where to start. The device filters tips based on the specific felony region of problem, making the entire prison process more streamlined for customers. The usage of NLP allows the assistant to apprehend and respond to complicated criminal queries by way of interpreting the person's purpose, irrespective of how the query is framed. This makes the AI capable of dealing with a huge variety of legal topics, from civil disputes to crook regulation, own family law, and property issues. furthermore, it includes a tremendous database of criminal texts and precedents, that are continuously updated to make sure the accuracy and relevance of the information provided. users can ask detailed questions on particular legal guidelines, felony techniques, or sections of the Indian Penal Code, and the assistant will provide specific and contextually appropriate responses.

Beyond its actual-time responsiveness, the assistant can function a precious device for customers in rural or under-privileged areas wherein access to felony experts can be limited. through democratizing get admission to to prison facts, it empowers those who may in any other case conflict to navigate the complexities of the prison gadget. this can be especially impactful for marginalized communities or those with constrained monetary resources who won't be capable of have the funds for conventional prison consultations. Looking in the direction of the future, this machine holds great potential for further enhancement. One region for growth is the enlargement of language aid to cover even extra of India's local languages, ensuring that no network is left behind. moreover, incorporating extra comprehensive prison research equipment may want to allow users to delve deeper into specific cases, precedents, and criminal critiques, broadening the scope of data available. this may transform the assistant into now not handiest a query-response device but additionally a crim-

inal research assistant for college students, professionals, and ordinary users alike. In end, the AI Voice Assistant

for prison statistics, powered by means of Generative AI, is a pioneering answer designed to make prison statistics more available to the diverse population of India. by using presenting actual-time, multilingual help and legal professional suggestions, it empowers customers with the knowledge had to navigate criminal problems independently. With ongoing advancements in NLP and AI technology, this gadget has the capability to reshape how prison services are delivered, making justice extra on hand and equitable for all.

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