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Research Paper

LEGAL RIGHTS AWARENESS CHATBOT

¹ K Akhila, ² Duresh Rathod, ³ B Siri, ⁴ G Sravanthi, ⁵ J Hemanth Kumar

¹ Assistant Professor, ^{2,3,4,5} Students

Department of CSE(AIML)

Siddhartha Institute of Technology & Sciences, Narapally

akhilaasara@siddhartha.org.in, 23TQ1A66A6@siddhartha.co.in, 23TQ1A6692@siddhartha.co.in,

23TQ1A6668@siddhartha.co.in, 23TQ1A66A5@siddhartha.co.in

Abstract

The **Legal Rights Awareness Chatbot** is an Artificial Intelligence-based conversational system designed to provide users with general and educational information about legal rights, responsibilities, and basic legal procedures. Many people are unaware of their fundamental rights or do not know where to find reliable legal information. The proposed chatbot provides an easy-to-use platform where users can ask questions in natural language and receive understandable information about relevant legal topics.

The system allows users to ask questions related to areas such as consumer rights, workplace rights, cybercrime awareness, fundamental rights, property-related issues, women's and children's rights, online fraud, and basic legal procedures. Natural Language Processing techniques are used to understand the user's question and identify important legal concepts. The system then retrieves relevant information from a curated legal knowledge base and presents it in simple language.

The chatbot is designed primarily for **legal awareness and education**, rather than providing professional legal representation or definitive legal advice. It can explain commonly used legal terms, describe general rights and procedures, and guide users toward appropriate official authorities or qualified legal professionals when a matter requires detailed legal assistance. This helps users understand their situation before taking further action.

A major feature of the system is its ability to provide conversational interaction. Instead of searching through lengthy legal documents, users can ask questions in everyday language and receive structured responses. The system can also provide related topics, frequently asked questions, important precautions, and general information about where a person may seek further assistance.

Overall, the **Legal Rights Awareness Chatbot** aims to make basic legal information more accessible, understandable, and convenient. It can be useful for students, citizens, employees, consumers, and other individuals seeking general legal awareness. The system can be enhanced in the future with multilingual support, jurisdiction-specific information, voice interaction, verified legal resources, document guidance, and connections to official legal service platforms.

I. INTRODUCTION

Legal awareness is important because people need to understand their rights and responsibilities in everyday situations. However, legal information is often written using complex terminology and may be difficult for ordinary users to understand. People may also be unaware of which authority or organization they should approach when they face a legal problem. An accessible information system can help users obtain basic legal knowledge more conveniently.

Traditional methods of obtaining legal information include searching websites, reading government documents, consulting books, or approaching legal professionals. Although these methods can provide valuable information, they may require significant time and effort. Users may also find it difficult to determine which information is relevant to their particular question. A conversational AI system can simplify the initial process of finding general legal information.

The **Legal Rights Awareness Chatbot** uses Natural Language Processing and Artificial Intelligence to understand questions written in natural language. A user can ask a question such as "What are my rights as a consumer?" or "What should I do if I receive an online fraud message?" The system analyzes the question, identifies the relevant legal topic, retrieves appropriate information, and presents the answer in a clear and understandable format.

The system focuses on legal awareness rather than replacing lawyers or courts. Legal rules can vary depending on jurisdiction, circumstances, and changes in legislation. Therefore, the chatbot should clearly communicate its limitations and provide links or references to authoritative sources whenever possible. For complex or urgent matters, users should be encouraged to consult a qualified legal professional or appropriate official authority.

The proposed system aims to improve access to basic legal information through an interactive and user-friendly platform. By combining AI, NLP, knowledge retrieval, and responsible information handling, the chatbot can help users understand common legal concepts and identify possible next steps. It can serve as an educational first point of contact while maintaining appropriate limitations around professional legal advice.

II. LITERATURE SURVEY

Traditional legal information systems primarily consist of online legal databases, government websites, legal libraries, and document repositories. These systems provide access to legislation, regulations, judgments, and legal documents. However, users may need to understand legal terminology and search using appropriate keywords to find relevant information. This can create difficulties for people without legal knowledge.

Research in **Natural Language Processing for legal applications** has explored techniques for classifying legal documents, extracting legal entities, retrieving relevant cases, and answering legal questions. NLP can help transform unstructured legal language into searchable information. These techniques demonstrate the potential for AI systems to make legal information easier to access, although legal language remains complex and highly dependent on context.

Legal question-answering systems have also been developed to help users find answers from legal documents. Such systems may use information retrieval, keyword matching, semantic similarity, and machine learning techniques. They can reduce the time required to search large collections of legal information. However, simple retrieval systems may struggle with questions that require contextual understanding or contain ambiguous language.

Recent advances in Transformer-based models and Large Language Models have improved conversational question answering and text understanding. These models can summarize lengthy documents, explain complex concepts, and generate natural-language responses. Their application to legal information systems can improve user interaction, but generated responses may contain inaccuracies or unsupported claims. Therefore, reliable source retrieval and validation are important for legal applications.

Research into responsible AI has emphasized transparency, explainability, privacy, and human oversight for high-impact domains such as law. A legal chatbot should distinguish between general information and professional legal advice. It should also avoid presenting uncertain information as a definitive legal conclusion. Clear disclaimers, source attribution, jurisdiction awareness, and escalation to qualified professionals are important safety features.

Existing research demonstrates that combining NLP, semantic search, knowledge bases, and Generative AI can provide a useful conversational interface for legal awareness. However, challenges remain in maintaining updated legal information, handling jurisdiction-specific rules, avoiding hallucinated legal claims, and communicating uncertainty. The proposed **Legal Rights Awareness Chatbot** addresses these challenges through curated legal information, semantic retrieval, response validation, source references, and clear limitations on the type of assistance provided.

III. SYSTEM ANALYSIS

The **Legal Rights Awareness Chatbot** is designed to provide users with general and educational information about legal rights and procedures. The user enters a legal question through a web or mobile chatbot interface. The NLP module processes the question and identifies important legal terms, entities, and user intent. A preprocessing module cleans and normalizes the input before further analysis. The system identifies the relevant legal category, such as consumer rights, cybercrime, employment, or fundamental rights. A knowledge retrieval module searches a curated legal knowledge base for relevant information. Semantic matching is used to identify information that is relevant to the meaning of the question. The response-generation module converts the retrieved information into simple and understandable language. A validation layer checks the response for unsupported claims, excessive certainty, and inappropriate legal advice. The system provides source references and clearly explains that the information is general and educational. Complex cases can be directed toward qualified legal professionals or appropriate authorities. Finally, the chatbot displays the response and related legal-awareness resources to the user.

Existing System

Existing legal information is commonly obtained through government websites, legal databases, books, search engines, and consultations with lawyers. Government and legal websites can provide authoritative information, but their content may contain complex legal terminology that is difficult for ordinary users to understand. Search engines can return many results, requiring users to determine which sources are reliable and relevant. Legal databases often require users to understand appropriate keywords and legal concepts before searching. Professional legal consultation provides personalized assistance but may not always be immediately accessible or affordable for everyone. Traditional FAQ systems provide answers to predefined questions but have limited conversational flexibility. Some online legal chatbots use fixed decision trees and may not understand naturally written questions effectively. Users may also find it difficult to determine whether information applies to their specific jurisdiction. Changes in laws and regulations can make outdated information misleading. Searching lengthy legal documents manually can consume considerable time. Therefore, existing systems provide useful resources but may lack an accessible, conversational, and intelligent approach to basic legal awareness.

Disadvantages of Existing System

- Legal information may be difficult for ordinary users to understand.
- Legal documents often contain complex terminology.
- Users must manually search through large amounts of information.
- Search engines may return unreliable or irrelevant sources.
- Traditional FAQ systems have limited conversational ability.
- Fixed rule-based systems may not understand natural-language questions.
- Jurisdiction-specific information can be difficult to identify.
- Legal information may become outdated when laws change.
- Users may incorrectly interpret general information as legal advice.
- Limited personalization of information based on user questions.
- Difficult for users to identify appropriate authorities or next steps.
- Professional legal consultation may not always be immediately accessible.

Proposed System

The proposed **Legal Rights Awareness Chatbot** uses Artificial Intelligence and Natural Language Processing to provide accessible legal-awareness information through conversation. Users can ask questions in natural language without needing to know complex legal terminology. The NLP module identifies the user's intent, legal topic, important terms, and relevant context. A semantic retrieval system searches a curated knowledge base containing verified legal information and educational resources. The system retrieves relevant sections based on the meaning of the user's question rather than relying only on exact keywords. A Generative AI module converts the retrieved information into simple and structured explanations. The response can include general rights, responsibilities, procedures, precautions, and relevant official resources. A safety and validation layer checks responses for unsupported claims and inappropriate certainty. The chatbot clearly distinguishes general legal information from professional legal advice. When a matter is complex or requires professional interpretation, the system recommends consulting a qualified lawyer or appropriate authority. The knowledge base can be regularly reviewed and updated to reflect changes

in applicable legal information. The final system provides an interactive, accessible, and educational legal-awareness experience.

Advantages of Proposed System

- Provides legal information through natural-language conversation.
- Makes complex legal concepts easier to understand.
- Uses NLP to understand user questions and intent.
- Provides semantic rather than only keyword-based information retrieval.
- Organizes information according to legal topics.
- Reduces the time required to search lengthy legal documents.
- Provides source references and authoritative resources.
- Clearly distinguishes legal awareness from professional legal advice.
- Includes response validation and safety controls.
- Can guide users toward appropriate authorities or legal professionals.
- Supports continuous updating of the legal knowledge base.
- Provides a convenient and user-friendly interface.

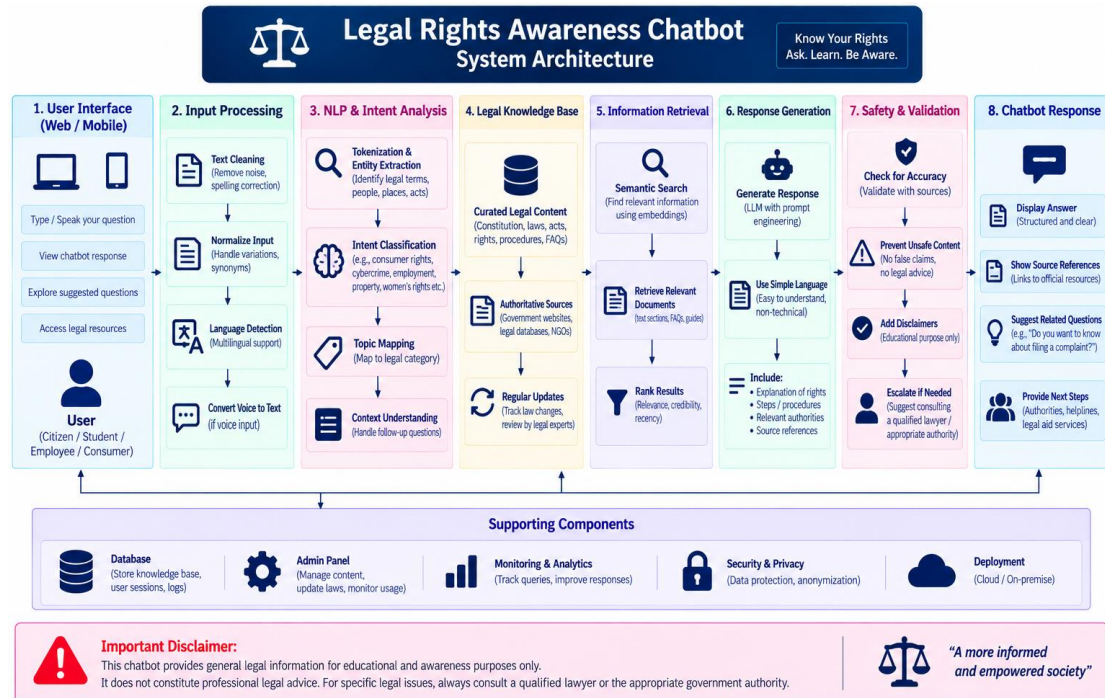
IV. METHODOLOGY

The methodology begins when a user enters a legal question into the chatbot interface. The system first preprocesses the input by cleaning the text and identifying important words and phrases. Natural Language Processing techniques are then used to determine the user's intent and identify relevant legal concepts. The system classifies the question into an appropriate legal category such as consumer, employment, cybercrime, property, or fundamental rights. A semantic search module converts the question into a meaningful representation for information retrieval. The retrieval engine searches a curated and regularly reviewed legal knowledge base for relevant information. The retrieved information is ranked according to its relevance to the user's question. A Generative AI component converts the retrieved information into a clear and easy-to-understand response. A validation and safety layer checks the response for unsupported legal claims and inappropriate certainty. The system adds appropriate disclaimers and source references to the generated response. If the question involves a complex or jurisdiction-specific matter, the system recommends consulting an appropriate legal professional or official authority. Finally, the response is displayed through the chatbot interface along with related resources and suggested questions.

SYSTEM ARCHITECTURE

The system architecture consists of several interconnected modules that work together to provide reliable legal-awareness information. The User Interface allows users to enter questions and interact with the chatbot. The Input Processing Module cleans and normalizes the user's natural-language query. The NLP and Intent Analysis Module identifies legal topics, entities, keywords, and user intent. The Legal Knowledge Base stores curated information about rights, responsibilities, procedures, and legal resources. The Semantic Retrieval Engine searches the knowledge base and identifies information relevant to the user's question. The AI Response Generation Module converts retrieved information into a simple conversational response. The Source and Evidence Module associates responses with relevant authoritative references. The Safety and Validation Layer checks for unsupported claims, excessive certainty, and inappropriate legal

advice. The Disclaimer and Escalation Module explains the educational purpose and recommends professional assistance when required. The Database and Monitoring Layer manages necessary user sessions, system logs, content updates, and quality monitoring. Finally, the Chatbot Response Interface displays the final educational information and relevant resources to the user.



V. RESULT AND OUTPUT

The collage displays the NyayaBot Legal Rights Awareness Chatbot interface across six panels:

- Top Left:** Main landing page titled "Your Rights Our Knowledge". It features a chatbot icon, a "Start a Conversation" button, and sections for "Simple Answers", "Reliable Sources", "Wide Coverage", and "Educational Purpose". A quote at the bottom reads: "An informed citizen builds a stronger and fairer society."
- Top Middle:** "Chat with NyayaBot" interface. It shows a sample question: "What are my rights as a consumer if I receive a defective product?" and a response detailing rights like replacement, refund, and compensation under the Consumer Protection Act, 2019.
- Top Right:** "Steps to File a Consumer Complaint" guide. It lists six steps: 1. Collect Evidence, 2. Contact the Seller, 3. File a Complaint, 4. Submit Required Documents, 5. Attend the Hearing, and 6. Receive the Order. It also includes a "Relevant Law" section (Consumer Protection Act, 2019) and a "Disclaimer".
- Bottom Left:** "Popular Questions" section listing common queries such as "What are my rights as a consumer?", "What should I do if I face online fraud?", and "How can I register a cybercrime complaint?".
- Bottom Middle:** "Example Outputs" section showing sample responses for "Consumer Rights", "Cybercrime", "Women's Rights", and "Fundamental Rights". It includes a "Question", an "Answer" citing the Consumer Protection Act, 2019, and "Related Links".
- Bottom Right:** "Chat History" section showing a list of previous chat sessions with timestamps and a "Clear All" button. It also includes a "Keep Learning" section with a "Explore Resources" button.

VI. CONCLUSION

The Legal Rights Awareness Chatbot provides an intelligent and user-friendly way for people to access general information about their legal rights, responsibilities, and basic procedures. By using Artificial Intelligence and Natural Language Processing, the system allows users to ask legal questions in simple natural language and receive understandable responses.

The system combines NLP, semantic search, a curated legal knowledge base, and AI-based response generation to identify the user's legal topic and provide relevant educational information. It can explain common legal concepts, provide general procedures, highlight important precautions, and guide users toward appropriate official resources.

A major advantage of the proposed system is its focus on responsible legal information. The chatbot does not claim to replace lawyers, courts, or legal authorities. It provides clear disclaimers, uses validated information sources, and can recommend consulting a qualified legal professional when a situation requires specific legal advice or interpretation.

Overall, the Legal Rights Awareness Chatbot can make basic legal information more accessible, understandable, and convenient for students, citizens, employees, consumers, and other users. In the future, the system can be enhanced with multilingual support, voice-based interaction, jurisdiction-specific legal information, regularly updated legal databases, document assistance, and integration with official legal service platforms.

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