An AI-Based Legal Consultation System

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***Abstract*—Access to legal information can be challenging for ordinary citizens because of complex legal terminology, procedures, and the availability of legal resources across different platforms. This paper presents an AI based legal consultation system, Nyaya Setu AI, developed to make legal information more accessible, understandable, and actionable. The proposed system integrates an AI powered legal chatbot with legal section search, case law retrieval, judgment summarization, document generation, legal glossary, cost estimation, evidence checklist, and limitation period guidance. The system uses a modular architecture in which natural language queries are processed and relevant legal information is retrieved from structured and vector based legal databases. The platform provides simplified responses and relevant legal references to assist users in understanding legal matters and taking preliminary actions. Functional, integration, system, performance, security, and usability testing were conducted to evaluate the system. The testing results reported in the project demonstrate that the core modules functioned as expected and that the system provides an accessible and user-friendly experience. The system is intended as a preliminary legal assistance and awareness tool and is not a replacement for professional legal advice.**

***Index Terms*—Artificial intelligence, legal consultation, legal chatbot, natural language processing, legal information retrieval, case law retrieval, legal assistance.**

I. INTRODUCTION

The legal system in India is governed by a vast collection of laws, acts, and judicial precedents. Although these resources provide comprehensive legal provisions, their complexity can create difficulties for ordinary citizens who may not be familiar with legal terminology, procedures, required documents, and applicable rights. Lack of legal awareness can result in delayed action, improper filing of documents, or difficulty in identifying appropriate legal remedies. [1, 2]

The proposed AI-based legal consultation system is developed to address these accessibility challenges by providing legal information in a simplified and user-friendly manner. The system combines artificial intelligence-based features with practical legal assistance tools to help users understand legal concepts and take preliminary actions. It provides a legal chatbot for natural language queries, legal section search, case law retrieval, and simplified legal information. It also includes supporting tools such as complaint document generation, legal glossary, cost estimation, and evidence checklists. The system follows a modular architecture in which different components operate as interconnected modules. The legal chatbot processes user queries and interacts with legal databases and a vector database to retrieve relevant information. The platform also incorporates authentication, role-based access control, and security mechanisms to protect user interactions and system resources.

The primary objective of the proposed system is to make legal knowledge more accessible, understandable, and actionable for citizens, particularly users who have limited familiarity with legal terminology and procedures. The system is designed as a preliminary legal assistance and awareness platform and is not intended to replace professional legal advice. Its modular design also provides scope for future enhancements such as multilingual support, voice-based interaction, and integration with digital legal services.

II. LITERATURE REVIEW

The digitization of legal information has significantly improved access to laws, judgments, and court-related information. In India, platforms such as India Code, the Supreme Court Case Status Portal, and the eCourts platform provide citizens with access to

statutes, case information, and judicial records [1], [2]. These platforms have reduced the dependence on physical legal records and made a large amount of legal information available online. However, their effective use often requires familiarity with legal terminology, case identifiers, or specific legal keywords, which can create difficulties for users without legal knowledge.

Artificial intelligence has also been applied to develop legal chatbots and digital legal assistants. Such systems allow users to interact with legal services using natural language and can assist with repetitive legal tasks, frequently asked questions, and basic legal procedures. Research on artificial intelligence applications in law highlights the opportunities as well as challenges associated with applying AI technologies in the legal domain [3]. These approaches demonstrate the potential of AI-based legal assistance and conversational interfaces to make legal services more accessible. However, the reliability of AI-based legal assistance depends significantly on the quality, completeness, and currency of the underlying legal information. [3, 4, 8]
Legal information retrieval is another important area in the development of intelligent legal systems. Traditional keyword-based search requires users to identify appropriate legal terms or section numbers before retrieving information. AI-based semantic retrieval can instead identify relevant information based on the meaning of a user's query. The proposed system uses embedding-based retrieval for locating relevant case laws and a vector database for storing and retrieving legal texts and related information. Such approaches can help users obtain relevant legal content even when their queries do not exactly match the wording of the source documents. [3, 10, 11]

Another important area is the automatic processing and summarization of legal documents. Legal judgments and statutory documents can be lengthy and difficult for ordinary users to understand. Simplified summaries can help users identify important information without having to interpret the complete legal document. Similarly, automated document generation can assist users in preparing preliminary complaints and other legal documents. However, automated processing of legal content has limitations because simplification may omit important legal context, and inaccurate or outdated source data may affect the reliability of the generated information. [5, 6, 7]
The review of existing legal information systems and AI-based legal assistance approaches indicates that many available solutions focus on specific functions such as information retrieval, case tracking, or automated assistance. There is a need for an integrated system that combines conversational legal assistance with legal section search, case law retrieval, document generation, judgment summarization, legal glossary, cost estimation, and evidence-related guidance. The proposed system addresses this requirement by combining these functionalities within a single platform intended to provide accessible preliminary legal information and assistance to users. [4, 9]
Legal document automation is another area where intelligent systems can support users in completing preliminary legal tasks. Traditional document preparation methods often require users to understand the required structure and information before preparing a complaint or other legal document. Automated document generation can reduce this difficulty by collecting relevant information from users and generating documents in a structured format. Such functionality can be particularly useful for users who are unfamiliar with legal documentation procedures. [6, 7]
Existing digital legal services also highlight the importance of supporting utilities that assist users beyond basic information retrieval. Features such as legal glossaries, evidence checklists, limitation period guidance, and cost estimation can help users understand the practical requirements associated with legal procedures. Integrating these utilities with AI-based conversational assistance can provide users with both legal information and preliminary procedural guidance through a unified platform. This integrated approach forms the basis for the proposed system. [1, 2]

III. PROPOSED SYSTEM

The proposed system is designed as an integrated digital platform that provides users with accessible and simplified legal information. It combines artificial intelligence based legal assistance with multiple supporting legal tools to help users understand legal concepts, identify relevant legal provisions, and

perform preliminary legal tasks. The system is intended to reduce the difficulty of accessing legal information by providing different functionalities through a single platform.

The system follows a modular client server architecture in which the user interface, application services, artificial intelligence components, and legal information databases work together. The frontend provides an interface through which users can submit legal queries and access various services. The backend processes user requests and coordinates communication between the different modules and data sources. A vector database is used to support semantic retrieval of relevant legal information based on the meaning of user queries.

A. System Architecture

The architecture of the proposed system consists of several interconnected components, including the user interface, application layer, artificial intelligence module, legal databases, vector database, and supporting utility modules. Users interact with the system through the frontend, while the backend manages requests, authentication, data processing, and communication with the required services. [12]

The AI based legal chatbot processes natural language queries and retrieves relevant information from the available legal sources. The retrieved information is then used to generate simplified responses for the user. The system also provides access to legal sections, case laws, judgment summaries, legal documents, and other supporting resources. [3, 9]

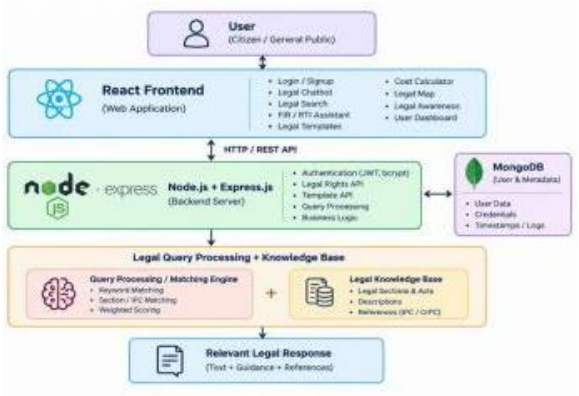

Figure 1: System Architecture

B. Major Functional Modules

The proposed system integrates several modules to provide a comprehensive legal assistance platform.

The major modules include:

- AI Based Legal Chatbot: Allows users to submit legal questions in natural language and receive simplified legal information with relevant references.
- Legal Section Search: Enables users to search for relevant sections and provisions of laws.
- Case Law Retrieval: Helps users retrieve relevant judicial decisions and case law based on their queries.
- Judgment Summarization: Provides simplified summaries of lengthy legal judgments to improve understanding.
- Complaint Document Generation: Assists users in preparing preliminary complaint documents based on the information provided by them.
- Legal Glossary: Explains commonly used legal terms in a simpler manner.
- Cost Estimation: Provides guidance regarding applicable legal costs such as stamp duty and court fees.
- Evidence Checklist: Helps users identify documents and evidence that may be relevant to a legal matter.
- Limitation Period Guidance: Provides information related to applicable limitation periods for legal matters.
- User Authentication and Administration: Provides authentication, role-based access control, and administrative functionality for managing system resources.

C. AI Based Legal Query Processing

When a user submits a legal query, the system processes the query using natural language processing techniques. The query is analyzed to identify the relevant legal context and information requirements. The system then retrieves relevant legal information from the available legal databases and vector-based storage. [4, 8]

The retrieved information is used to generate a simplified response that is easier for users without legal expertise to understand. Where applicable, relevant legal sections, case laws, or other references are provided along with the response. This approach allows users to interact with legal information using natural language rather than relying only on traditional keyword-based searches. [8, 9]

D. Legal Information Retrieval

Legal information retrieval is an important component of the proposed system. The system uses structured legal information together with vector based semantic retrieval to identify relevant content. Unlike traditional searches that depend mainly on exact keywords, semantic retrieval can identify information based on the meaning and context of the user's query. [3, 10, 11] This approach can assist users in finding relevant legal sections, case laws, and other legal information even when the terminology used in the query differs from the wording contained in the source documents. The retrieved information forms the basis for providing relevant and understandable legal assistance. [3, 11]

E. Security and User Management

Security is incorporated into the proposed system through authentication and authorization mechanisms. Role based access control is used to manage access to different system functionalities. The system also incorporates encrypted communication and input validation mechanisms to protect user interactions and system resources. [13]

These security measures are intended to reduce unauthorized access and common application-level security risks. User management and administrative functionality further support controlled access to the system and its resources.

The system also separates user and administrative functions to ensure that access to system resources is controlled according to the assigned roles. Authentication mechanisms are used to verify users, while authorization determines the functionalities and resources that can be accessed by different users. Input validation is also applied to reduce the risk of malicious or invalid data being processed by the application. These measures help maintain the confidentiality and integrity of user interactions and support secure operation of the proposed system. [13]

IV. METHODOLOGY

The methodology adopted for the proposed AI-based legal consultation system follows a client server-based approach that integrates a responsive user interface, backend processing, artificial intelligence components, legal information retrieval, and supporting legal utilities. The system was designed to provide users with simplified legal information while maintaining usability, scalability, and security. The methodology includes system analysis, requirement identification, query processing, legal information retrieval, AI based response generation, document automation, and system validation.

A. System Analysis

The proposed system follows a client server architecture in which the frontend acts as the client and communicates with backend processing components. The frontend is designed using React.js to provide a responsive interface through which users can interact with the different features of the system. The backend is responsible for processing user requests, handling natural language queries, performing data retrieval, and coordinating the different services of the application. [14, 15, 16]

The requirements of the system were divided into functional and non-functional requirements. Functional requirements include legal chatbot interaction, legal section search, case law retrieval, document generation, judgment summarization, legal glossary, cost estimation, evidence checklist, and limitation period guidance. Non-functional requirements include usability, security, scalability, reliability, and maintainability. [12]

B. User Query Processing

The legal chatbot acts as the primary interaction mechanism between the user and the proposed system. Users can enter their legal questions using natural language instead of relying on technical legal terminology or section numbers. The submitted query is processed by the system to identify the relevant legal context and information required to generate an appropriate response. [4, 8]

The query processing mechanism is designed to connect the user's request with the available legal information sources. This enables the system to retrieve relevant legal provisions, case laws, or other supporting information before presenting the result to the user. The objective of this process is to provide information in a simplified form while maintaining references to relevant legal sources.

C. Legal Information Retrieval

Legal information retrieval forms an important part of the proposed methodology. The system uses legal databases containing information such as bare acts,

legal provisions, judgments, and case laws. In addition to conventional data storage, a vector database is used for semantic storage and retrieval of legal information. [1, 2, 3]

When a user submits a query, the system searches for relevant information based on the meaning and context of the query. This semantic retrieval approach allows the system to identify relevant legal content even when the words used by the user do not exactly match the wording of the stored legal documents. Retrieved information can then be used by the chatbot and other modules to provide relevant legal assistance. [10, 11]

D. AI Based Response Generation

After relevant legal information is retrieved, the AI component processes the available information to generate a response that can be understood by users without specialized legal knowledge. The system aims to convert complex legal information into simpler explanations while retaining relevant legal references. [8, 9]

The response generation process is intended to provide users with preliminary legal information rather than professional legal advice. The system can provide references to relevant sections and case laws where applicable. This approach combines natural language interaction with information retrieval to make legal resources easier to understand and access.

E. Document Generation and Supporting Services

The proposed system includes several supporting services that extend its functionality beyond conversational assistance. The document generation module assists users in preparing preliminary complaint documents by collecting required information and generating documents in a structured format. The system also provides an evidence checklist to help users identify supporting documents relevant to a particular legal matter. [6, 7]

Additional services include legal section search, case law retrieval, judgment summarization, legal glossary, cost estimation, and limitation period guidance. These modules are designed to provide users with practical assistance alongside legal information retrieval. By integrating these functions into a single platform, the methodology aims to reduce the need for users to depend on multiple separate resources for basic legal guidance.

F. System Validation and Testing

The proposed system was validated through multiple levels of testing to verify the functionality, reliability, security, and usability of its modules. The testing methodology followed a bottom-up approach in which individual modules were tested first, followed by integration and system-level testing. [12]

Unit testing was used to verify individual modules independently, while integration testing examined communication between the frontend, backend APIs, AI services, and databases. System testing was then performed using end-to-end scenarios such as user authentication, legal queries, legal searches, document generation, and other system functions. [12]

Performance and load testing were conducted to evaluate chatbot response time, legal search latency, document generation time, and database retrieval performance. Security testing included HTTPS and SSL/TLS validation, authentication and authorization checks, role-based access control, and input validation against common application-level threats. Usability testing was also conducted with users without legal or technical backgrounds to evaluate the simplicity and accessibility of the system. [13]

The validation process confirmed the implementation of the specified functional and non-functional requirements. The project report states that the tested modules and end-to-end scenarios operated successfully, while usability feedback indicated that the interface was intuitive and that the simplified legal explanations supported better understanding of legal information.

V. IMPLEMENTATION AND EVALUATION

The proposed system was implemented as a modular web-based platform integrating the user interface, backend services, artificial intelligence components, legal information databases, and supporting legal utilities. The implementation focuses on providing an accessible interface for users while maintaining the functionality required for legal information retrieval, conversational assistance, and preliminary legal document preparation.

A. System Implementation

The system was implemented using a client server architecture. The frontend provides the user interface through which users can access the chatbot and other

legal services. The backend handles user requests, application logic, data processing, and communication with the relevant databases and AI services. [14, 15, 16]

The system was designed in a modular manner so that individual components such as the chatbot, case law retrieval, document generator, glossary, and other legal utilities can operate as interconnected modules. This modular structure supports maintainability and allows individual components to be enhanced without requiring major changes to the complete system.

B. User Interface and Application Modules

The user interface provides access to the major functionalities of the proposed system through a unified platform. Users can interact with the legal chatbot, search for legal sections, retrieve case laws, access simplified judgment information, and use supporting legal utilities.



Figure 2: User Interface

The document generation module allows users to provide information related to a legal issue and generate a structured preliminary complaint document. The system also provides a legal glossary for explaining legal terminology, an evidence checklist for identifying supporting documents, and cost estimation functionality for providing information related to court fees and stamp duty.



Figure 3: User Login Interface

C. AI and Legal Information Retrieval

The AI based chatbot is implemented to process natural language legal queries and provide simplified responses. The system uses legal information sources and a vector database to retrieve relevant legal content. Case laws and other legal information can be retrieved based on the semantic relationship between the user's query and the stored information. [3, 8, 9]

The retrieved information is used to support the generation of responses and provide relevant legal references. This combination of artificial intelligence and semantic information retrieval allows users to interact with legal resources using natural language rather than depending entirely on conventional keyword-based searches. [9, 11]

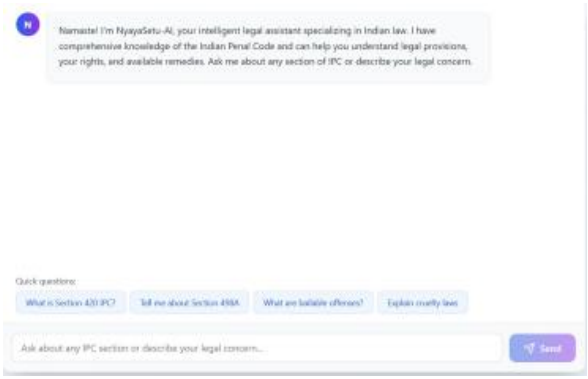

Figure 4: AI-Based Legal Consultation Interface

D. Database and Backend Integration

The backend integrates the different modules of the system with the required data sources. Legal information, case laws, templates, and user related information are managed through the corresponding database components. The vector database supports semantic retrieval of legal texts and related information. [15, 16]

The authentication and authorization components are integrated with the application to control access to system resources. Administrative functionality allows authorized users to manage legal datasets and document templates. Communication between the frontend and backend is protected through appropriate security mechanisms described in the system design. [13]

E. Testing and Evaluation

The implemented system was evaluated using functional, integration, system, performance, security, usability, and validation testing. Individual modules

were first tested independently, followed by testing of their interactions and complete system workflows. [12]

The evaluation included user authentication, legal chatbot responses, legal section search, case law retrieval, complaint document generation, legal glossary, cost estimation, evidence checklist, logout functionality, security validation, administrative functions, and document template management. The project report records the tested cases as successfully passed.

Performance evaluation considered chatbot response time, API latency for legal searches, document generation time, and database retrieval speed. The system was reported to maintain acceptable response times and stability under moderate to high user loads. Security evaluation included HTTPS and SSL/TLS validation, authentication and authorization checks, role-based access control, and input validation. Usability evaluation with users without legal or technical backgrounds indicated that the interface was easy to navigate and that the simplified legal explanations supported easier interaction with the system.

VI. RESULTS AND DISCUSSION

The evaluation of the proposed AI based legal consultation system was carried out through functional, integration, system, performance, security, usability, and validation testing. The results demonstrate that the major modules of the system operated according to their intended functionality and that the different components could work together as an integrated platform.

A. Functional Results

The individual modules were tested using predefined inputs and expected outputs. The legal chatbot successfully processed legal queries and provided relevant legal information with simplified explanations. The Bare Act search and case law retrieval modules returned relevant legal information for the tested queries.

The document generation module successfully generated complaint drafts based on the information provided by the user. The cost estimation module displayed estimated court fees and stamp duty for the tested case, while the evidence checklist generated a list of supporting documents for the specified complaint type. The legal glossary and other supporting modules also operated as expected.

B. Integration and System Results

Integration testing confirmed successful communication between the frontend, backend APIs, artificial intelligence services, and databases. The chatbot was successfully integrated with the laws database and vector database, while the document generator communicated with the templates database. Authentication and administrative functions were also successfully integrated with their respective data sources.

End to end system testing covered user registration, login and logout, legal queries, Bare Act and case law searches, complaint generation, cost estimation, and navigation between different system features. The project report records that all tested end to end scenarios passed successfully.

C. Security and Reliability Results

Security testing evaluated secure communication, authentication, authorization, role-based access control, and input validation. The tested API requests successfully passed HTTPS communication, header validation, CORS checks, and authentication checks. [13]

The administrative module successfully allowed authorized updates to the legal database, while template management changes were reflected for users. The chatbot fallback mechanism also handled queries outside the available dataset by providing an appropriate response rather than generating an unsupported answer.

D. Performance and Usability Results

Performance and load testing evaluated chatbot response time, API latency, document generation time, and database retrieval performance. The project report indicates that the system maintained acceptable response times and stability under the tested load conditions, although specific numerical performance measurements were not reported. Usability testing was conducted with users without legal or technical backgrounds. The reported feedback indicated that the interface was intuitive, the explanations were understandable, and the system reduced hesitation when accessing legal information. The validation

results further indicated improvement in users' understanding and confidence regarding basic legal information.

E. Overall Discussion

The results indicate that the proposed system successfully combines conversational legal assistance with legal information retrieval and practical supporting utilities. The integration of the chatbot, legal search, document generation, cost estimation, evidence checklist, and other modules provides users with multiple forms of preliminary legal assistance through a unified platform.

The testing results support the primary objective of improving accessibility and understanding of legal information. However, the results also indicate the importance of maintaining accurate and updated legal datasets because the quality of AI generated assistance depends on the information available to the system. The system is therefore best considered a preliminary legal assistance and awareness platform rather than a substitute for professional legal advice. [3, 4, 5]

VII. LIMITATIONS AND FUTURE SCOPE

A. Limitations

Although the proposed AI based legal consultation system provides several useful legal assistance features, certain limitations must be considered. The system is designed as a preliminary legal assistance and awareness platform and cannot replace professional legal advice. Legal cases may involve complex facts and interpretations that require the expertise of qualified legal professionals.

Another important limitation is the dependency on the accuracy, completeness, and freshness of the legal datasets. Laws may be amended, new legislation may be introduced, and judicial interpretations may change over time. If the underlying legal information is incomplete or outdated, the reliability of the information provided by the system may be affected. [1, 2]

The use of artificial intelligence for legal information processing also introduces the possibility of oversimplification. While simplified explanations and summaries improve accessibility, important legal nuances or contextual details may not always be fully represented. Therefore, continuous validation and appropriate human oversight are necessary for maintaining the reliability of AI generated legal information. [5, 6, 7]

The current system also has limitations in language accessibility. The project report identifies English as the primary operating language, while broader regional language support remains an area for future development. Similarly, the current system can be further extended to support users who may have limited literacy or prefer voice-based interaction.

B. Future Scope

The modular architecture of the proposed system provides opportunities for several future enhancements. One major area is the expansion of multilingual support. Integration of natural language processing models for regional languages such as Hindi, Tamil, Bengali, and other Indian languages can make legal information more accessible to a wider population. [4]

A voice based legal chatbot can also be developed to allow users to submit spoken queries and receive audio-based responses. Such an interface could improve accessibility for users with limited literacy and users who face difficulties interacting with text-based systems.

Another potential enhancement is integration with digital court services. Future versions of the system can provide integration with electronic court filing systems and case status services. This could allow users to submit generated documents electronically and track information related to filings, deadlines, and hearings.

The system can also be expanded to cover specialized areas of law such as taxation, corporate compliance, intellectual property, and family law. Additional legal datasets and specialized modules can be incorporated without significantly changing the existing modular architecture.

Further development can include mobile first interfaces, improved AI models, speech to text capabilities, larger legal datasets, and integration with government e governance services. These enhancements can improve accessibility, coverage, and practical usefulness while maintaining the system's role as a preliminary legal assistance platform.

VIII. CONCLUSION

The proposed AI based legal consultation system demonstrates how artificial intelligence, semantic legal information retrieval, and modular digital services can be combined to improve access to legal information. The system integrates a legal chatbot with legal section search, case law retrieval, judgment summarization, complaint document generation, legal glossary, cost estimation, evidence checklist, and limitation period guidance. [1, 2, 3, 4]

Testing and validation of the system covered functional, integration, system, performance, security, and usability aspects. The reported results indicate that the major modules operated as intended and that the integrated platform provided an accessible and user-friendly experience. User validation also indicated improved understanding and confidence among users without legal backgrounds.

Despite these results, the system remains a preliminary legal assistance and awareness tool. Its effectiveness depends on accurate, complete, and regularly updated legal datasets, and AI generated explanations may require human oversight when legal matters involve complex interpretations. Future enhancements such as multilingual support, voice-based interaction, court service integration, and specialized legal modules can further extend its accessibility and usefulness.

Overall, the proposed system demonstrates the potential of AI based digital systems to reduce barriers to legal information and support citizens in understanding legal processes, while maintaining the need for professional legal advice in complex legal matters.

The integration of multiple legal assistance functions within a single platform is an important aspect of the proposed system. Instead of limiting the platform to conversational question answering, the system combines legal information retrieval with practical utilities such as complaint document generation, evidence checklists, cost estimation, legal glossary, and limitation period guidance. This integrated approach can reduce the effort required by users to search for basic legal information across different resources and can provide a more structured way of understanding preliminary legal requirements.

The evaluation also demonstrates the importance of combining artificial intelligence with reliable legal information sources. The chatbot and semantic retrieval components can improve the accessibility of legal content by allowing users to interact using natural language and by retrieving information based on the meaning of their queries. However, the reliability of the generated information remains dependent on the quality and currency of the underlying legal datasets. Therefore, regular updating, validation, and monitoring of legal information are important for maintaining the usefulness of the system. [3, 5, 9]

The proposed system provides a foundation for further development of AI based legal assistance platforms. With future improvements in multilingual interaction, voice-based access, digital court service integration, and specialized legal modules, the system can potentially serve a wider range of users and use cases. These developments can further improve accessibility while preserving the system's primary purpose of providing preliminary legal information and awareness rather than replacing qualified legal professionals.

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