



AI APP TO PROVIDE LEGAL INFORMATION I.E. CASE LAWS VARIOUS IMPORTANT LANDMARK JUDGEMENT IMPORTANT CASE LEGAL MATTERS

Thakur Shyamnarayan Degree College

Guide: Mr. Saugat Das

Mr. Soham Talekar, Mr. Ashutosh Singh

Assistant Professor, Undergraduate Student, Undergraduate
Student Department of Information Technology
University of Mumbai, Mumbai, India

Abstract : Our project AI App to provide legal information i.e. Case laws Various important landmark judgement on important case legal matters, to introduce the development of an AI-based mobile application to provide users with precise and easily accessible legal information, including case laws, landmark judgments, and summaries of important legal matters. The application uses artificial intelligence and natural language processing (NLP) to allow users to search legal matters in simple language and obtain related case information and explanations. It serves as a digital legal assistant, providing well-organized information on various topics such as constitutional law, criminal law, civil law, and many more. Users can search or obtain landmark Supreme Court and High Court cases, view case summaries, and understand legal terms in simple language. The application is highly beneficial for law students, lawyers, and commoners who want to understand legal terms. The AI algorithms employed in the application allow for rapid and relevant case retrievals while ensuring the accuracy of legal information. The application also emphasizes the latest updates on legal matters and cases. By integrating AI and legal research, the application enhances access to justice and legal awareness in a digital form.

IndexTerms : Artificial Intelligence, Legal Information System, Case Law Database, Landmark Judgments, Legal Research Platform, Judicial Precedents, Legal Analytics, Statutory Interpretation, Court Decisions Repository, Legal Knowledge Management, Web Application, Natural Language Processing, Legal Assistance System.

I. INTRODUCTION

A. Background

We are really honored to submit our project report on 'AI App to provide legal information i.e. Case laws various important landmark judgement on important case legal matters'. We are really grateful to 'Thakur Shyamnarayan Degree College' who has given us a great platform for this project. He/she has always been with us in his/her tireless efforts and ideas to make this project a success. We are also grateful for the co-operation and valuable suggestions given by our H.O.D Mr. Vijay Rawool and our teachers. We are also grateful to all staff members of our institutions who have assisted us in this project either directly or indirectly. to find new ideas and to develop the confidence to work on independent projects. We are thankful to our project guide 'Mr. Saugat Das', for the success of Last but not the least would like to thank our Principal, Parents, Colleague for theory priceless suggestions and support. their rights and duties as per the law. Artificial Intelligence (AI) provides a solution to these problems. AI, along with Natural Language Processing (NLP), has the ability to process a large amount of legal data, find patterns in it, and then present complex legal verdicts in a simplified manner. With the use of AI in the legal sector, this project proposes to develop a system that will provide all case laws and verdicts in one place and present them in a simplified manner.

B. Problem Statement

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C. Objectives

The objectives of the proposed project are as follows:

- Development of an AI-based web legal information system.
- Providing access to landmark judgments and case laws.
- Facilitating fast and accurate legal research through intelligent search.
- Providing secure, user-friendly, and up-to-date legal information access

II. PURPOSE AND PROBLEM DEFINITION

A. Purpose of the System

The main intention behind this system is to develop a structured and digital platform where users can easily access legal information, case laws, and landmark judgments. The system will help to:

- Make legal research simple
- Offer centralized legal information
- Enhance access to judicial decisions
- Spread legal awareness through technology

B. Operational Challenges

The system tackles various issues such as:

- Handling a large volume of legal data
- Offering accurate and relevant search results
- Ensuring secure user authentication
- Keeping legal information updated
- Maintaining structured and organized databases

III. Scope

A. Functional Scope

The system offers the following modules:

- User Registration and Login
- Case Law and Landmark Judgment Search
- AI-Based Legal Query Assistance
- Legal Document and Case Summary Viewing
- Admin Panel for Content Management and Monitoring

B. Technical Scope

- Frontend (HTML5 / Tailwind CSS / JavaScript): Manages user interface and real-time interactions
- Backend (Flask): Handles routing, authentication, and AI API integration.
- Database (MySQL): Stores user data and legal case records.
- AI Layer (Gemini 1.5 Flash): Processes natural language legal queries.
- Platform: Web-based legal information application.

C. Limitations

- Requires stable internet connectivity
- AI responses may not replace professional legal advice
- Dependent on the accuracy of available legal data
- Limited access to region-specific or unpublished case records

IV. EXISTING SYSTEM / LITERATURE REVIEW

A. Traditional Legal Research

Traditional legal research involves the use of physical law books, journals, and manual case law analysis. These approaches are time-consuming, unstructured, and may not be easily accessible.

B. Digital Legal Platforms

Some digital platforms and websites offer access to case law, but these platforms are often deficient in intelligent search capabilities, centralized databases, and real-time updates. Users still have to struggle to find relevant judgments quickly.

C. Research Gap

The current state of legal research systems typically has the following shortcomings:

- Provide limited or no AI-assisted legal query handling:
- Lack structured and centralized case law databases
- Provide minimal monitoring of updates or new judgments
- Provide limited user-friendly features for non-experts

The proposed system will address this research gap by offering a centralized, AI-driven, automated, and user-friendly legal information system.

V. SYSTEM DESIGN AND ARCHITECTURE

A. Architecture Overview

The system architecture is a three-layer structure:

- **Presentation Layer:** User interface for advocates, students, and general users.
- **Application Layer:** Business logic, AI query processing, and request handling.
- **Database Layer:** Secure storage of legal data, user info, and AI logs.

B. Key Modules

- **User Registration & Authentication:** Secure account creation for all users.
- **Legal Knowledge Base:** Centralized repository of case laws, acts, and judgments.
- **AI Query Processing:** NLP-based module to interpret legal queries.
- **Case Law Search:** Search by title, citation, court, or keywords.
- **Landmark Judgments:** Summaries of important Supreme Court and High Court decisions.
- **Document Upload & Analysis:** Automated analysis of uploaded legal documents.
- **Admin Module:** Manages users, data updates, and content verification.
- **Feedback & Reporting:** Collects user suggestions and error reports.
- **Legal News & Updates:** Latest case developments, amendments, and bills.

C. Data Design

Database Tables:

- **User Table:** user_id, name, email, role, password, subscription_type
- **Case_Law Table:** case_id, title, citation, court, year, summary, full_text
- **Judgment Table:** judgment_id, case_id, legal_principle, keywords, verdict
- **Case Query_Log Table:** query_id, user_id, query_text, ai_response, timestamp
- **News Table:** news_id, headline, description, date, source_link

VI. IMPLEMENTATION AND TESTING

A. Implementation Approach:

The Advocate.AI system is a web-based platform that uses React and Flask with Gemini 1.5 Flash AI to offer instant, context-aware legal advice. It has a conversational interface, Text-to-Speech functionality, and PDF export for easy and convenient access.

B. Coding Details:

The system has a modular design with Flask backend implementation for routing, API calls, and rate limiting, and React frontend implementation for UI, async requests, and local chat storage. The AI component interprets queries with a legal context prompt for accurate responses. PDF export and TTS functionality improve usability and accessibility.

C. Functional Logic & Algorithm:

The user poses a legal question, and the AI analyzes it to offer a precise answer. The answer is displayed in the chat interface and can be saved or listened to.

D. Security & Error Handling:

The system provides secure login access with authentication and input validation to restrict the entry of invalid or malicious data. Rate limiting is also implemented to restrict API misuse, allowing only a limited number of requests per minute. Errors from the AI or network are handled with friendly messages. Local storage is implemented for chat history to improve privacy and minimize server load.

E. Testing

The system has been tested at various levels to ensure that it is reliable and functions properly. Unit testing was done to test the modules, while integration testing was done to ensure that the frontend, backend, and AI modules are working well together. System testing was done to ensure that functionalities such as PDF export and Text-to-Speech are working properly. Lastly, user acceptance testing was done to ensure that the system is user-friendly.

VII. USER INTERFACE DESIGN

The UI design of the app emphasizes simplicity, accessibility, and professionalism. Home Screen: Features the search bar for legal searches and the latest updates on cases. Dashboard: Personalized dashboard for registered users, featuring bookmarks and search history. Case Search Interface: Features advanced filters based on year, court, act, or keyword. AI Chat Window: Engages the user with a chatbot to answer legal queries. Document Upload Page: Allows the user to upload case documents through a drag-and-drop interface. Mobile-Friendly Design: Features an adaptive interface for smartphones, tablets, and desktops. Accessibility Options: Offers support for multiple languages and voice search.



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Additional Features to Empower You



Customized Solutions

Tailored legal insights that match your unique situation and needs effectively.



Multilingual Support

Communicate in multiple languages ensuring clarity & accessibility for diverse users.



Continuous Learning

Always updated with the latest laws and judicial rulings for the best guidance.




User-Friendly Interface

Intuitive design that makes navigation and interaction smooth and enjoyable for all users.

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Who Uses Advocate.AI?


Designed for a wide range of legal professionals and individuals.



Individual Users

Get answers to personal legal questions, document review, and basic legal guidance.


- Tenant rights questions
- Contract reviews
- Small claims guidance



Law Students

Research assistance, case analysis, and learning reinforcement tool.


- Case law research
- Legal writing assistance
- Exam preparation



Law Firms

Enhance productivity with research automation and document analysis.

- Case preparation
- Document review
- Research automation



Small Businesses

Affordable legal guidance for compliance, contracts, and business formation.

- Contract drafting
- Compliance checks
- Business formation

VIII. CONCLUSION

The Advocate.AI system facilitates legal research by providing instant access to case laws, judgments, and legal advice. The system breaks down complex legal expressions into simpler forms for students, lawyers, and common users. The system increases efficiency and accessibility while ensuring that the answers are accurate and contextually relevant. The system provides a convenient means for users to access legal information at any time.

IX. Future Developments

- The Advocate.AI tool enhances legal research by allowing instant access to case laws, judgments, and legal advice. The system breaks down complicated legal expressions for students, lawyers, and other users. The tool enhances efficiency and accessibility while ensuring that the answers are accurate and contextually relevant. In general, the tool provides a convenient means of accessing legal information at any time.

- Mobile app version for convenience
- Improved AI technology for detailed legal advice
- Link with government legal portals
- Predictive suggestions via AI for case references

X. ACKNOWLEDGMENT

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