

HACK-CSE-LERATE

Abstract

Problem Title: AI-Powered Legal Aid Chat Bot

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Problem Description:

Access to legal assistance is a significant challenge for low-income individuals due to various barriers:

1. **Financial Barriers:** High legal fees and additional costs (court fees, document filing, etc.) make hiring a lawyer unaffordable for many people.
2. **Lack of Awareness:** Many individuals are unaware of their legal rights or struggle with complex legal language, leading to poor decision-making or missed opportunities for justice.
3. **Overburdened Legal Aid Services:** Public legal aid services are often understaffed and underfunded, causing long wait times and limited availability, especially for non-urgent cases.
4. **Geographic & Social Barriers:** Rural populations, non-native speakers, and vulnerable groups (e.g., undocumented immigrants, domestic violence victims) face additional challenges accessing legal support due to geographic isolation, language barriers, or fear of retaliation.
5. **Consequences:** Without legal assistance, individuals may suffer from issues like eviction, wrongful termination, or unfair treatment, which can lead to lasting social and financial problems.

This system creates an environment where the most vulnerable individuals are denied access to justice.

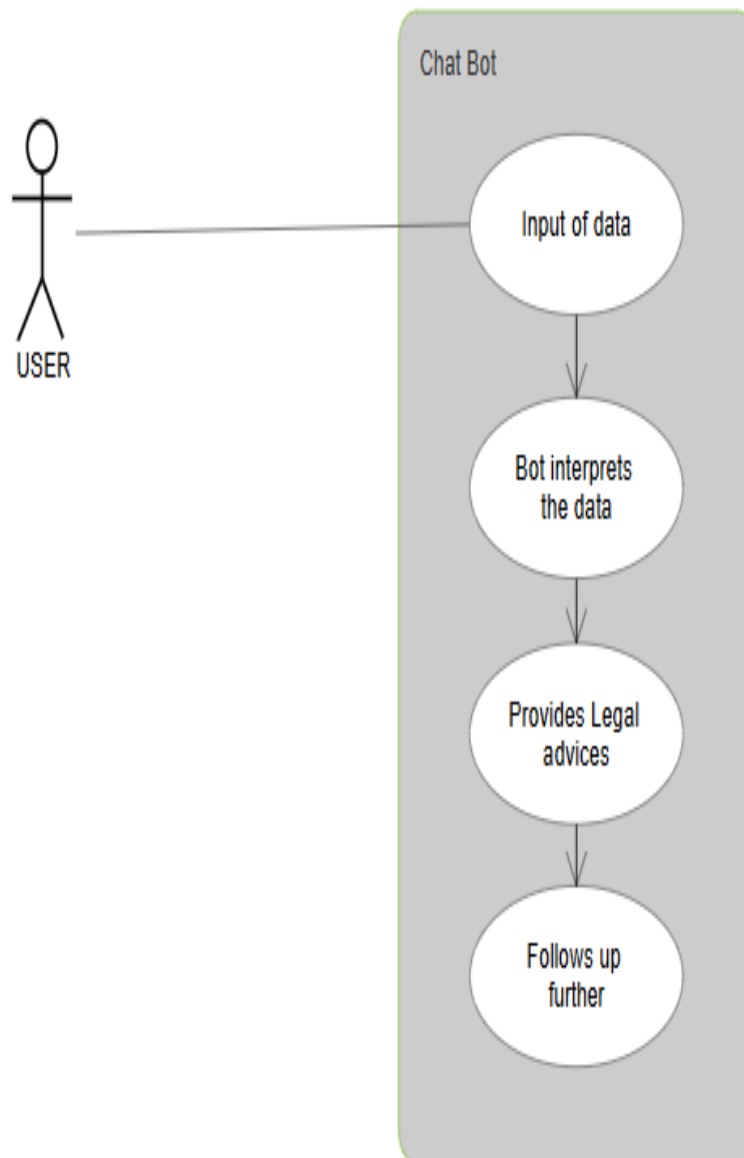
Proposed solution:

The AI-powered legal aid chat bot provides free, instant legal guidance to individuals, particularly those who are low-income or underserved. Here's a brief overview of its functionality:

- 1. NLP Understanding:** The chat bot uses Natural Language Processing (NLP) to interpret users' legal queries and identify their intent, such as tenant rights, labor laws, or immigration issues.
- 2. General Legal Advice:** Based on predefined legal frameworks, it provides general legal advice on common issues like eviction, employment disputes, or consumer rights, helping users understand their rights and options.
- 3. Guidance on Next Steps:** The chat bot suggests actionable next steps, such as filing complaints, drafting documents, or referring users to legal resources and services.
- 4. Connecting to Legal Professionals:** For more complex issues, the chat bot connects users to real legal professionals or local legal aid services for further assistance.

This chat bot empowers users with instant, accessible, and free legal support, reducing barriers to justice.

Use Case Diagram



Technology Stack

Tech Stack Breakdown for AI-Powered Legal Aid Chatbot

1. AI Model (NLP & Legal Query Processing)

- **OpenAI GPT:** Handles natural language understanding and generates responses to legal queries.
- **Google Dialog flow:** Manages chat bot conversations with intent recognition and contextual responses.

2. Backend (API & Business Logic)

- **FastAPI (Python):** A high-performance, asynchronous web framework for handling chat bot interactions efficiently.
- **Django (Python):** A robust framework for managing authentication, case tracking, and legal database interactions.

3. Database (Storage & Retrieval)

- **Postgre SQL:** A scalable, relational database for storing legal knowledge, user interactions, and case records.
- **Firebase:** Used for real-time data sync, especially for chat history and mobile interactions.

4. Frontend (User Interface)

- **React.js (Web):** Provides a smooth, responsive chatbot interface for web users.
- **Flutter (Mobile App):** Enables cross-platform mobile access with a seamless UI experience.

5. Cloud Services (Scalability & Deployment)

- **AWS Lambda:** Server less architecture for handling chat bot requests efficiently, ensuring scalability and cost-effectiveness.

This stack ensures the chat bot is **fast, scalable, and accessible** across multiple platforms while offering **real-time legal assistance** powered by AI.

Applications

Key Applications of the AI-Powered Legal Chatbot

1. Public Legal Aid & Access to Justice

- Provides free legal guidance to low-income individuals.
- Reduces pressure on public legal aid services by answering common legal queries.

2. Tenant & Employment Rights

- Assists with evictions, rental disputes, and tenant rights.
- Guides employees on unfair dismissal, workplace harassment, and wage theft.

3. Consumer Protection & Business Support

- Helps users resolve consumer disputes (refunds, faulty products, contract violations).
- Assists small businesses with legal compliance, contracts, and startup laws.

4. Family & Domestic Violence Assistance

- Provides confidential support for domestic violence victims (legal protections, restraining orders).
- Guides users on divorce, child custody, and alimony.

5. Immigration & Criminal Law Support

- Educates users on visa applications, asylum, and residency laws.
- Helps individuals understand rights during police encounters and criminal proceedings.

Conclusion:

This chat bot bridges the legal access gap by providing instant, free, and easy-to-understand legal assistance, making justice more accessible for everyone.