

Product Specification Document (PSD): JusAI (v1)

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1. Executive Summary

JusAI is an AI-powered legal assistant designed to significantly alleviate the overwhelming backlog of over 50 million pending cases in the Indian judiciary. It serves as an intelligent tool to augment, not replace, human legal expertise by focusing on the swift and efficient resolution of "small pending cases." JusAI's core functionality includes intelligent document analysis, a powerful Retrieval-Augmented Generation (RAG) system, and a conversational chat interface. The primary goal is to empower judges and legal professionals to focus on complex, high-stakes matters while ensuring faster, more accessible justice for all citizens.

2. Problem Statement

India's judicial system faces an unprecedented crisis of case backlog, leading to:

- **Delayed Justice:** "Justice delayed is justice denied," impacting citizens' fundamental rights.
- **Resource Strain:** Judges and court staff are overburdened, leading to inefficiencies.
- **Erosion of Trust:** Public confidence in the legal system diminishes due to prolonged legal battles.
- **Economic Impact:** Legal uncertainties can hinder investment and economic growth.

A significant portion of this backlog comprises "small pending cases" (e.g., minor disputes, traffic violations) which consume a disproportionate amount of court time and resources.

3. Product Goals

- **Accelerate Case Resolution:** Drastically reduce the time it takes to process and resolve low-complexity cases.
- **Empower Legal Professionals:** Free up judges and lawyers from mundane, repetitive tasks, allowing them to focus on high-value, strategic work.
- **Enhance Accessibility:** Make the legal process more transparent and accessible for the common citizen.
- **Mitigate Bias:** Implement ethical AI practices to ensure recommendations are fair, unbiased, and aligned with legal principles.

4. Target Audience

- **Judges & Court Staff:** Primary users seeking to streamline administrative tasks and expedite case management.

- **Lawyers & Legal Professionals:** Users who can leverage JusAI for faster legal research, document summarization, and case preparation.
- **Law Students:** Users who can use JusAI as a tool to better understand legal concepts and case law.
- **Citizens:** Individuals involved in small legal disputes who will benefit from a more transparent and efficient justice system.

5. Key Features

- **AI-Powered Document Analysis:** The core engine will accept document uploads (PDF, DOCX, TXT) and use a fine-tuned LLM to understand and extract key information.
- **Conversational RAG System:** The system will use a Retrieval-Augmented Generation (RAG) approach to answer user questions based *only* on the content of the uploaded documents.
- **Dynamic Chat Interface:** A secure and intuitive chat window will allow for multi-turn conversations, providing users with a natural way to interact with the AI.
- **Explicit Citation:** For every response, the AI will provide a clear citation of the legal document or section that the information came from, ensuring verifiability.
- **Polite & Context-Aware Communication:** The AI will be trained to handle greetings and to politely ask for a document when a question cannot be answered without one.
- **Seamless File Integration:** The UI will feature a clean file upload mechanism that integrates directly into the chat flow.

6. User Stories

- **As a lawyer,** I want to upload a case brief and ask the AI to summarize the key points, so that I can quickly understand the core facts of the case.
- **As a judge,** I want to upload a legal statute and ask the AI about a specific section's punishment, so that I can quickly verify the law without manual research.
- **As a law student,** I want to upload an article on a legal topic and ask the AI to explain a complex term in simple language, so that I can improve my understanding.
- **As a citizen,** I want to upload a legal notice and ask the AI to explain what it means, so that I can understand my situation better.

7. Technical Requirements

- **Frontend:** Next.js, React, Tailwind CSS.
- **Backend:** Node.js, Express.js (or Next.js API routes) to handle API endpoints, file uploads, and server-side logic.
- **AI/ML:**
 - **LLM:** Google Gemini 2.5 Flash for its speed and conversational capabilities.
 - **RAG:** A system built with a vector database (e.g., Supabase's **pgvector** or ChromaDB) for efficient document retrieval.
 - **File Parsing:** Libraries like **pdf-parse** for extracting text from various file formats.

- **Database:** Supabase for secure user authentication and for storing a future document library.

8. Non-Goals (v1)

- **AI-Driven Judgments:** The system will not make final judicial decisions. It is an assistant, and human judgment remains paramount.
- **Complex Case Prediction:** The tool will not be designed to predict outcomes for complex, high-stakes cases. Its scope is limited to low-complexity, high-volume matters.
- **AI-Driven Lawyering:** JusAI will not act as a lawyer or provide legal advice. Its role is strictly informational and for guidance.
- **End-to-End Case Management:** The tool will not be a full-fledged case management system. It will focus exclusively on the document analysis and chat layers.