

Gen AI Exchange Hackathon

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Problem Statement :Generative AI for Demystifying Legal Documents

Brief about the prototype:

The prototype is a web-based application that allows users to upload legal documents (PDF, DOCX, or text). Using Generative AI, it automatically:

- 1 .Summarizes the document in simple, easy-to-understand language.
- 2 .Highlights key clauses, obligations, and deadlines for quick reference.
- 3 .Provides an interactive Q&A interface where users can ask specific questions about the document and get AI-generated explanations.
- 4 .Optionally flags unusual or risky clauses to help users identify potential issues.

The interface is user-friendly, requiring no legal expertise, and the AI ensures that complex legal jargon is translated into plain English, making legal documents accessible and understandable for everyone.

How different is it from any of the other existing solutions?

Generative AI Summaries –

Rewrites complex legal language into plain, easy-to-understand text, unlike tools that only extract clauses.

Interactive Q&A – Users can ask specific questions about the document and get tailored answers.

Clause & Risk Highlighting –

Combines key obligations and potential red flags in one view.

User-Friendly – Designed for non-experts, no legal background needed.

Fast Insights – Provides instant AI-generated understanding, unlike

How will it be able to solve the problem?

Simplifies Language – Converts complex legal terms into plain English for easy understanding.

Highlights Key Information – Automatically identifies important clauses, deadlines, and obligations.

Provides Instant Answers – Users can ask questions and get precise AI-generated explanations.

Flags Risks – Detects unusual or risky clauses to prevent mistakes.

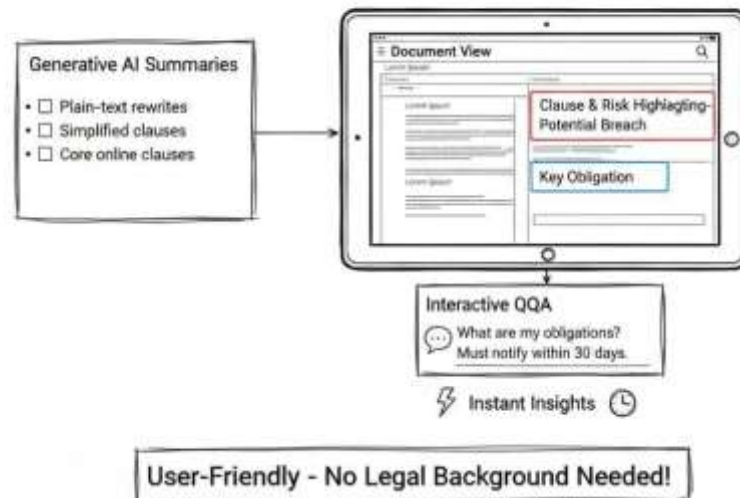
USP of the proposed solution

Our proposed solution stands out because it **integrates multiple AI-driven capabilities into a single, seamless platform**. It uses **Generative AI to simplify complex legal language** into plain, understandable text, provides an **interactive Q&A interface** for instant, context-aware explanations, and **automatically highlights key clauses, obligations, deadlines, and potential risks**. Unlike existing tools that only focus on one aspect, our platform is **designed for non-experts**, making legal documents not just readable, but **actionable and safe to use**. It empowers users to **quickly grasp critical information, avoid legal pitfalls, and make informed decisions**, all in real time.

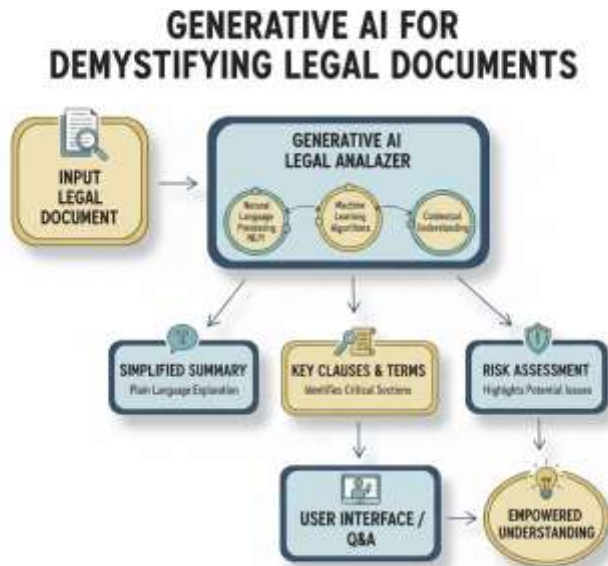
List of features offered by the solution:

- ✓ AI-Powered Summaries – Converts legal jargon into plain English.
- ✓ Key Clause & Risk Highlighting – Shows important obligations and potential risks.
- ✓ Interactive Q&A – Get instant answers about the document.
- ✓ User-Friendly Interface – Easy for non-experts to use.

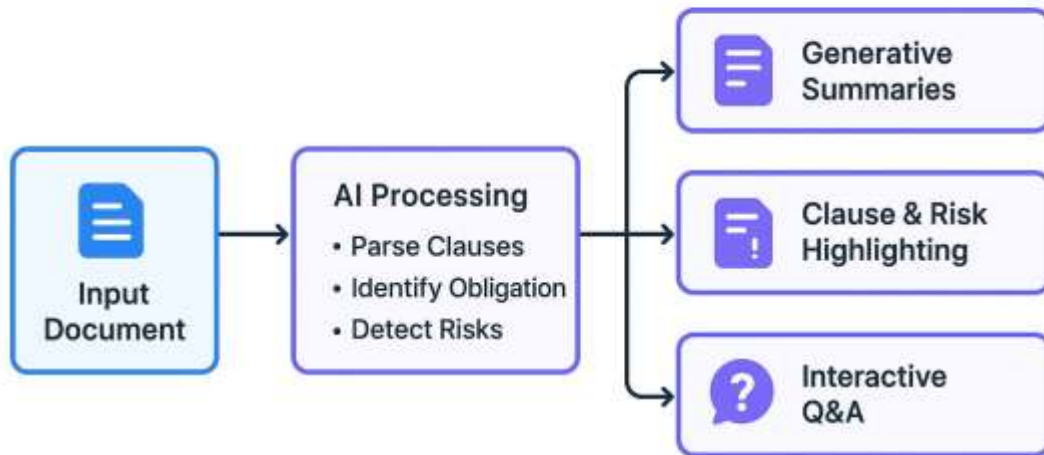
Legal AI Solution - Wireframe Concept



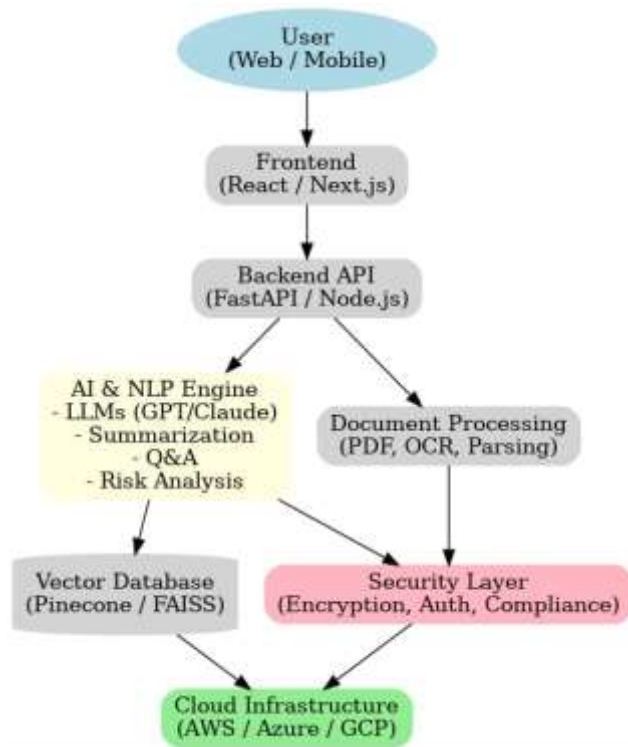
Process flow diagram or Use-case diagram



Wireframes/Mock diagrams of the proposed solution (optional)



Architecture diagram of the proposed solution



Technologies to be used in the solution:

Document Handling & Preprocessing :

PDF/Text Extraction using PyPDF2 , pdfplumber, Tika. OCR for scanned documents with Tesseract OCR .

AI & NLP Core :

Generative AI Models like GPT, LLaMA, Claude. Legal NLP Models using Hugging Face Transformers and spaCy (legal NER). Summarization and risk analysis with fine-tuned LLMs.

Interactive Q&A System :

Vector databases for context search such as Pinecone, Weaviate, FAISS. Embedding models like OpenAI embeddings and Sentence-BERT.

Backend & APIs :

Frameworks include FastAPI and Node.js (Express). APIs via REST or GraphQL. Authentication using OAuth 2.0 or JWT.

Frontend (User-Friendly Interface) :

Web App development with React.js or Next.js. UI frameworks like TailwindCSS or Material UI. Visualization using D3.js or Chart.js.

Estimated implementation cost (optional):

1 .Core AI/N LP Development

Pretrained LLM API (OpenAI/Claude): \$500–\$ 2 ,0 0 0 /month (depends on usage volume)

Custom Fine-tuning for legal documents: \$5,000–\$ 1 5 ,0 0 0 one-time

2 . Document Processing

PDF and OCR pipelines (open-source tools mostly free)

3 . Backend and Infrastructure

Cloud Hosting (AWS/GCP/Azure): \$3 00–\$ 2 ,0 0 0 /month

Containers (Docker + K ubernetes): built into infra costs

4 . Frontend Development

Web app development (React/Next.js): \$1 0,000–\$ 2 5 ,0 0 0 one-time

5 . Security and Compliance

Encryption, secure storage, audits: \$5,000–\$ 1 5 ,0 0 0

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Thank you