Problem Statement

"Introduction to GenAI and Simple LLM Inference on CPU and finetuning of LLM Model to create a Custom Chatbot"

<u>Introducing</u> - <u>Sahi Jawab</u> : AI <u>Legal Assistant</u>

- <u>Lack of Accessible Legal Information</u>: Many individuals struggle to find reliable and easily accessible legal information about Indian laws.
- <u>Complex Legal Terminology</u>: Legal documents and laws are often written in complex language that is difficult for non-experts to understand.
- <u>Difficulty in Legal Research</u>: Legal research can be time-consuming and challenging for those without legal expertise.
- <u>Limited Resources for Legal Guidance</u>: There are few platforms offering comprehensive, user-friendly legal advice or information in a single place.
- <u>Need for Efficient Document Analysis</u>: Legal professionals and students need tools for quick comparison and analysis of legal documents.



Your Nyaya Mitra

Unique Idea Brief (Solution) 💡

- Comprehensive Legal Platform: Sahi Jawab is a user-friendly platform providing accurate information on Indian laws. (Not Always True)
- Embedded Legal Texts: Integrated data from three newly enacted criminal laws: The Bharatiya Nyaya Sanhita (BNS), the Bharatiya Nagrik Suraksha Sanhita (BNSS), and the Bharatiya Sakshya Adhiniyam (BSA).
- Document Similarity Feature: Searches and compares the legal documents for similarities and differences.
- Interactive Query System: Users can ask legal questions and receive clear, concise answers based on the embedded legal texts. (Not Always True)
- Future Features: Plans for legal document translation, real-time discussions, lawyer connections, and a comprehensive legal repository.

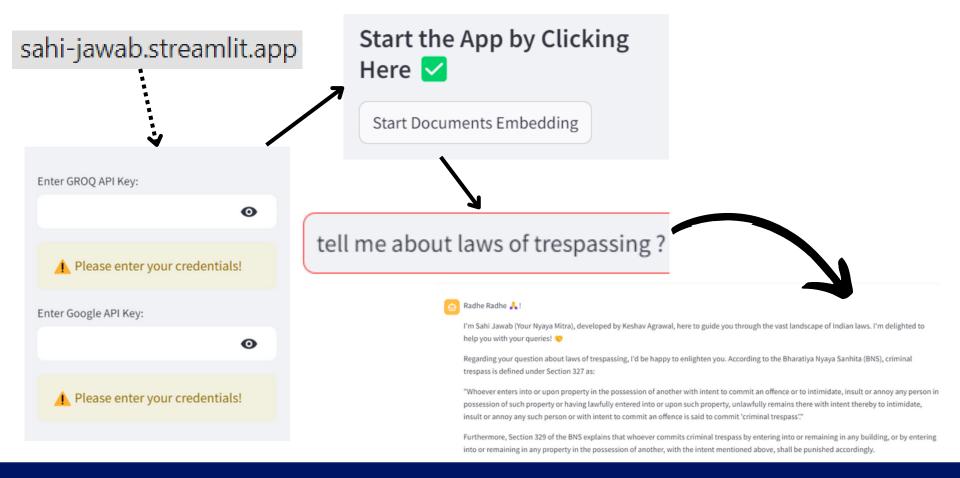
Features Offered 🌟

- Legal Data Integration: E Access to the complete text of BNS, BNSS, and BSA.
- **Document Similarity**: **Solution** Compare and analyze legal documents with advanced similarity detection.
- **User-Friendly Interface**: Intuitive design for easy navigation and query submission.
- Interactive Query System:
 Ask legal questions and receive clear, concise answers.
- Future Enhancements: Legal Papers Language Translation, Instant Talks, Connect with Verified Lawyers, and a Whole Repository of Legal Papers and Judgments.

Process flow

- User Interaction: User visits the platform and starts the document embedding by providing the API Keys and submits a legal query.
- **Vector Embeddings**: The system processes the document by creating the vector embeddings which helps in similarity search.
- Query Processing:
 The user then types in the legal query and system processes the query and the document using advanced algorithms.
- Information Retrieval: E Retrieves relevant legal information from the embedded texts or compares documents.
- User Engagement:
 Users can interact with the system for further questions or insights.

Process flow



Architecture Diagram

• Frontend: User Interface for submitting queries and viewing responses.

----> Made using Streamlit, an open-source Python Framework

• Backend: Server-side processing of queries and document analysis.

----> Made using Large Language Models(LLM's) like Llama3

• Data Storage: Database for storing legal texts and vector files.

----> Stored locally on the server running.

 APIs: Integration with GROQ API for fast inference and Google's Embedding Model for data processing.

----> API integration of GROQ for Llama3 and Google for Generative Embeddings.

Integration: Communication between frontend, backend, and external APIs.

----> All connected together made the AI Legal Chatbot.

Technologies used 🛠

- Large Language Model (LLM's): 🖭 AI models trained on very vast dataset.
- Google Embedding Model:

 High-quality embeddings for legal text analysis.
- Streamlit: (1) Open-source framework for rapid web app development frontend.
- Python: A Programming language for backend development and data processing.
- Streamlit Cloud: Cloud services for deploying and hosting the application.

Team members and contribution 🚅

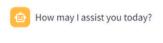
Team Lead & Member : Keshav Agrawal

Contribution:

- Project Lead and Developer Led the development, integration, and design of the platform.
- 🎎 Backend Developer Developed server-side functionalities and integrated APIs.
- * Frontend Developer Designed the user interface and user experience.
- E Legal Expert Provided legal expertise for embedding texts and validating legal information.
- * QA Specialist Conducted testing, identified issues, and ensured the platform's quality.

Project Snapshots









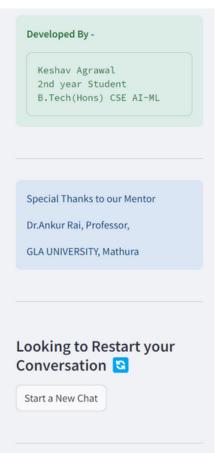
Your message

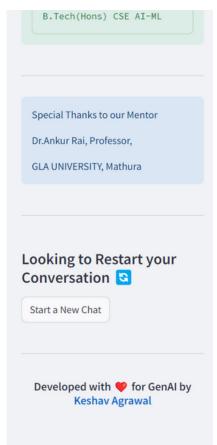
✓ API key already provided! ✓ API key already provided! Start the App by Clicking Here 🔽 Start Documents Embedding Developed By -

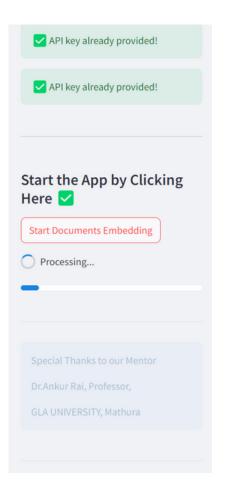
Keshav Agrawal

2nd year Student B.Tech(Hons) CSE AI-ML

Project Snapshots

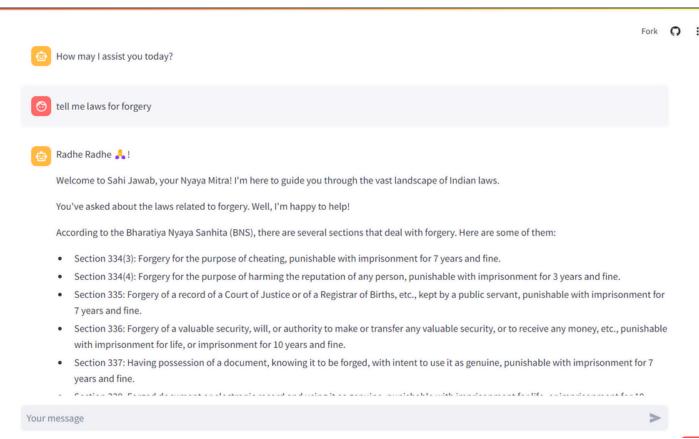






Project Snapshots





Document Similarity Search



Your message

with imprisonment for the, or imprisonment for 10 years and line.

- Section 337: Having possession of a document, knowing it to be forged, with intent to use it as genuine, punishable with imprisonment for 7 years and fine.
- Section 338: Forged document or electronic record and using it as genuine, punishable with imprisonment for life, or imprisonment for 10
 years and fine.
- Section 339: Making or possessing counterfeit seal, etc., with intent to commit forgery punishable under section 338, punishable with imprisonment for life, or imprisonment for 7 years and fine.
- Section 342: Falsification of accounts, punishable with imprisonment for 7 years and fine.

These are just a few of the laws related to forgery. If you have any specific questions or need further clarification, feel free to ask! 😊

(xiii) 335. For gery of record of Court or of public register, etc.

336. For gery of valuable security, will, etc.

337. Having possession of document described in section 335 or 336, knowing it to be forged and intending to use it as genuine.

338. Forged document or electronic record and using it as genuine.

339. Making or possessing counterfeit seal, etc., with intent to commit forgery punishable under section 336.

340. Counterfeiting device or mark used for authenticating documents described in section 336, or possessing counterfeit marked material.

341. Fraudulent cancellation, destruction, etc., of will, authority to adopt, or valuable security.

342. Falsification of accounts. Of Property Marks

Conclusion

- Successful Development: We have successfully created a platform that addresses critical gaps in legal information accessibility and document analysis.
- Deployed at: https://sahi-jawab.streamlit.app/
- Impactful Solution: Sahi Jawab aims to make legal knowledge accessible, accurate, and user-friendly for everyone.
- Exciting Future: We look forward to implementing upcoming features and continuing to improve the platform for a broader audience.

Thank You: A heartfelt thank you to everyone who supported and believed in this project.