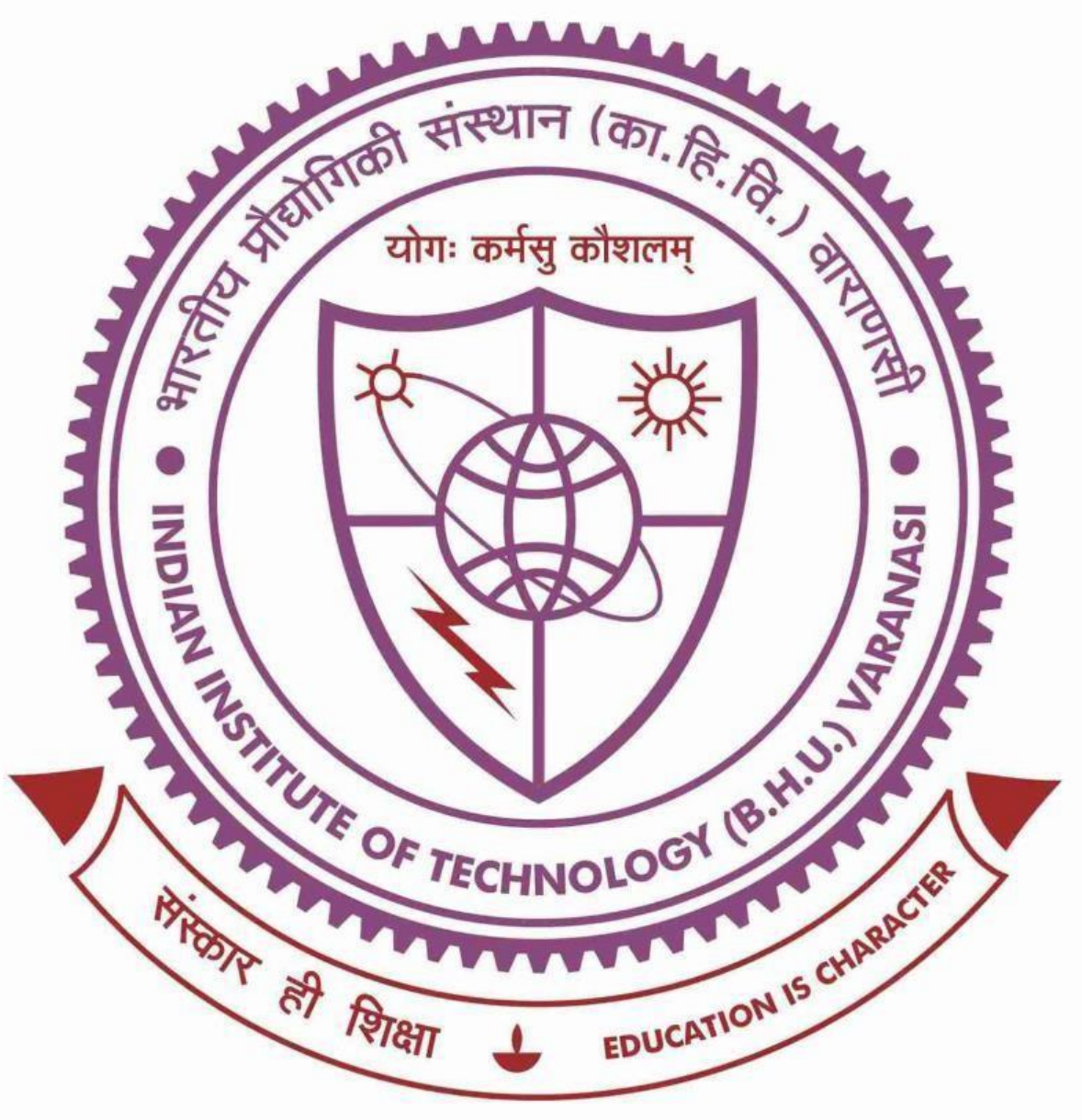


Vidhi.ai: The RAG Based AI Agent for Indian Legal Systems



Getting Started with Vidhi.ai. for Submission of Groclake Agentathon: Next Generation Agentic Apps(By Plotch.ai)

Submitted by: Team E_404

1. Kashish Tiwari

B.Tech in Mechanical Engineering, Indian Institute of Technology(BHU)

2. Ayush Raj

IDD* in Biomedical Engineering, Indian Institute of Technology(BHU)

*IDD: Integrated Dual Degree(B.Tech+M.Tech)

DECLARATION

We hereby declare that the project Vidhi.ai is an original work developed with the primary objective of creating an advanced RAG based legal AI assistant tailored for Indian laws. Vidhi.ai utilizes GPT-4 through ModelLake by GrocLake (Plotch.ai) and incorporates the latest Retrieval-Augmented Generation (RAG) techniques to provide accurate and reliable legal information.

The system's knowledge base is up-to-date with the latest legal reforms, including:

- Bharatiya Nyay Sanhita (BNS), replacing the Indian Penal Code (IPC).
- Bharatiya Nagarik Suraksha Sanhita (BNSS), replacing the Criminal Procedure Code (CrPC).
- Bharatiya Sakshya Adhiniyam (BSA), replacing the Indian Evidence Act.
- The Constitution of India.

Additionally, Vidhi.ai integrates DuckDuckGO Web Search for real-time updates and supports PDF uploads for personalized interaction, allowing users to chat with legal documents for better comprehension.

This project is created with a focus on accessibility, usability, and innovation, aimed at simplifying legal queries for users. However, We acknowledge that Vidhi.ai, being an AI-based system, may have limitations, and users are advised to consult professional lawyers for critical legal matters.

We affirm that all components of this project were developed with the highest ethical and professional standards, ensuring compliance with relevant laws and intellectual property regulations.

Date: 28.01.2025

Name:

Kashish Tiwari (kashish.tiwari.mec22@iitbhu.ac.in)

Ayush Raj (ayush.raj.bme22@iitbhu.ac.in)

Project Live @ <https://ayush09062004.github.io/Vidhi.ai/>

Github :- <https://github.com/ayush09062004/Vidhi.ai>

<https://github.com/ayush09062004/Vidhi.ai> ChatApp

<https://github.com/ayush09062004/Vidhi.ai> ChatWithPdf

ACKNOWLEDGMENT

First and foremost, We extend our heartfelt thanks to GrocLake (by Plotch.ai) for providing access to the ModelLake platform and enabling the integration of the powerful GPT-4 model, which forms the backbone of Vidhi.ai. Their innovative technology and resources were instrumental in bringing this project to life.

We would like to thank IIT BHU, Varanasi for providing us the opportunity and helped us to gain an invaluable experience and wonderful time during the project.

We also want to acknowledge the importance of DuckDuckGO for its web search capabilities and express my appreciation for the open-source and proprietary tools like Gradio, Hugging Face Spaces etc. used in the development of Vidhi.ai. These tools helped ensure that the system is both functional and user-friendly.

A special thanks to our family and friends(special mention to Aheli Poddar{ github: <https://github.com/XAheli> }, whose guidance, patience, motivation, and belief in our abilities gave us the strength to overcome challenges and strive for excellence.

Lastly, We extend our gratitude to the legal and technological communities for their ongoing efforts to make information more accessible and accurate. This project is our humble attempt to contribute to this vision by simplifying access to Indian legal knowledge.

Thank you all for your support, guidance, and encouragement.

Name: Kashish Tiwari & Ayush Raj

Date: 28.01.2025

Home-Page:

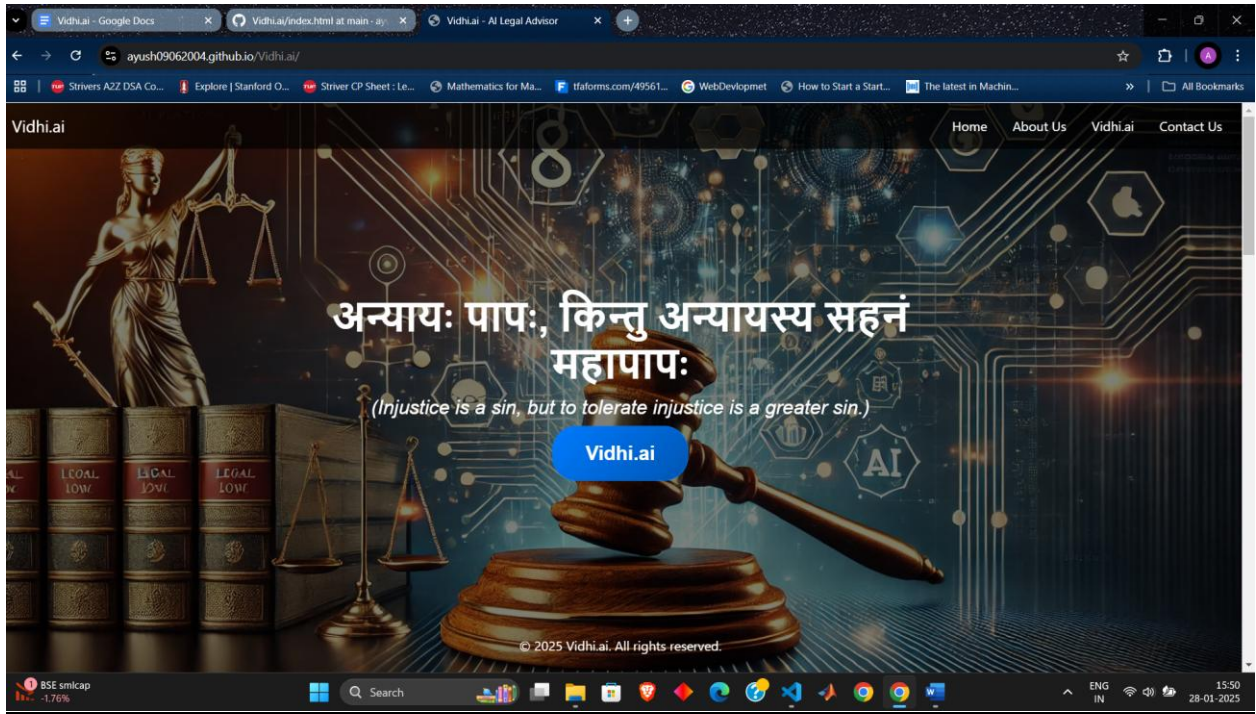


Fig.1. Homepage

The homepage of Vidhi.ai is designed to provide easy navigation and quick access to essential information about our services. At the top, you'll find the navigation bar, which includes links to Home, Vidhi.ai, About Us, and Contact Us. By clicking on each link, you will be directed to their respective pages:

- Vidhi.ai: Takes you to the Features page, where you can learn more about the capabilities and functionalities of Vidhi.ai.
- About Us: Directs you to the About Us section, where you can read about the mission, vision, and team behind Vidhi.ai.
- Contact Us: Provides a form where you can submit any queries or feedback to our team.

On the homepage, you'll also find an inspiring quote from the *Bhagavad Gita* (Chapter 2, Verse 33), both in Sanskrit and English:

अन्यायः पापः, किन्तु अन्यायस्य सहनं महापापः

(Injustice is a sin, but to tolerate injustice is a greater sin.)

This quote emphasizes the importance of standing against injustice, which aligns with Vidhi.ai's mission to bring legal clarity and fairness.

Below the quote, you will find a prominent Vidhi.ai button, which, when clicked, will take you directly to the Features page, allowing you to explore the full range of services Vidhi.ai offers.

Features-Page:

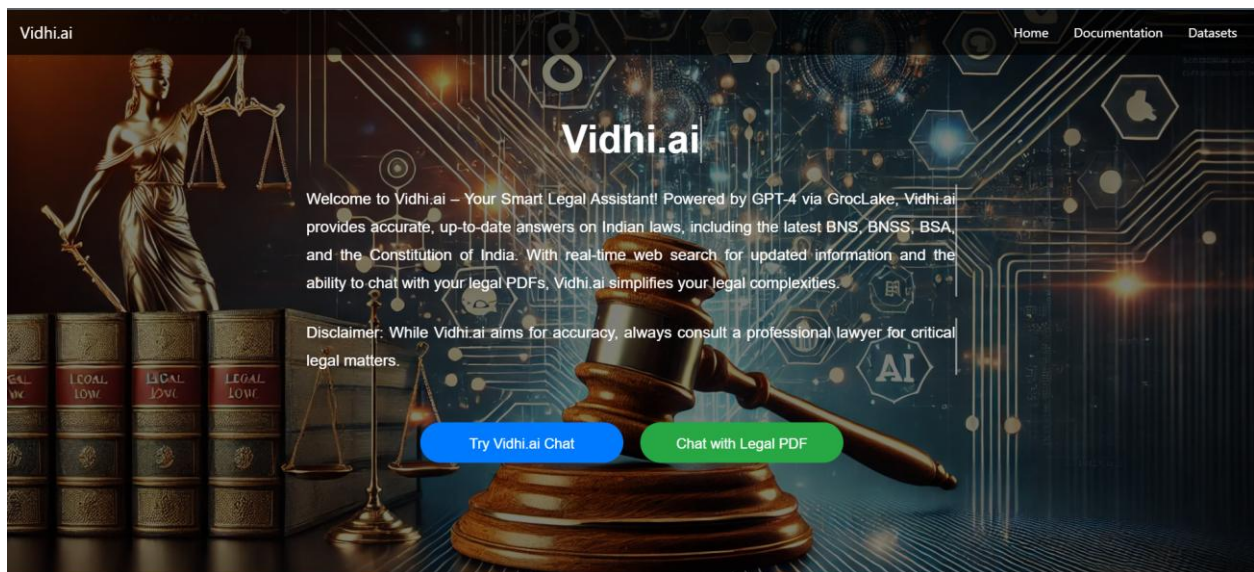


Fig.2: Features-page

The Features Page of Vidhi.ai offers a detailed overview of the powerful capabilities of our AI-based legal assistant. At the top of the page, you'll find the navigation bar, which allows easy access to other sections of the platform:

- **Home:** Takes you back to the homepage for quick navigation.
- **Documentation:** Provides access to all project-related documentation, including guides, FAQs, legal disclaimers, and more.
- **Datasets:** Directs you to the dataset page, where you can access key legal documents such as the BNS, BNSS, BSA, and Constitution of India (COI). Also **search engine made from Google programmable search engine** to allow you to search and read updated law related articles ads and distraction free from trusted sites.

Upon landing on the Features page, you are greeted by a welcome message:

Welcome to Vidhi.ai – Your Smart Legal Assistant!

Powered by GPT-4 via GrocLake, Vidhi.ai provides accurate, up-to-date answers on Indian laws, including the latest BNS, BNSS, BSA, and the Constitution of India. With real-time web search for updated information and the ability to chat with your legal PDFs, Vidhi.ai simplifies your legal complexities.

Disclaimer: While Vidhi.ai strives for accuracy, always consult a professional lawyer for critical legal matters.

Below the welcome message, you'll find two prominent buttons:

- **Chat with Vidhi.ai (Blue Button):** Clicking this will take you to the interactive chat interface where you can engage with Vidhi.ai to ask questions and receive immediate answers related to Indian laws.
- **Upload Your Legal PDF (Green Button):** This option allows you to upload any legal PDFs and engage in a chat with that specific document to better understand its contents and find specific information.

This page is designed to ensure that users can easily navigate through the platform's features,

make the most of Vidhi.ai's legal expertise, and access personalized support through the PDF chat functionality.

Chat with Vidhi.ai:

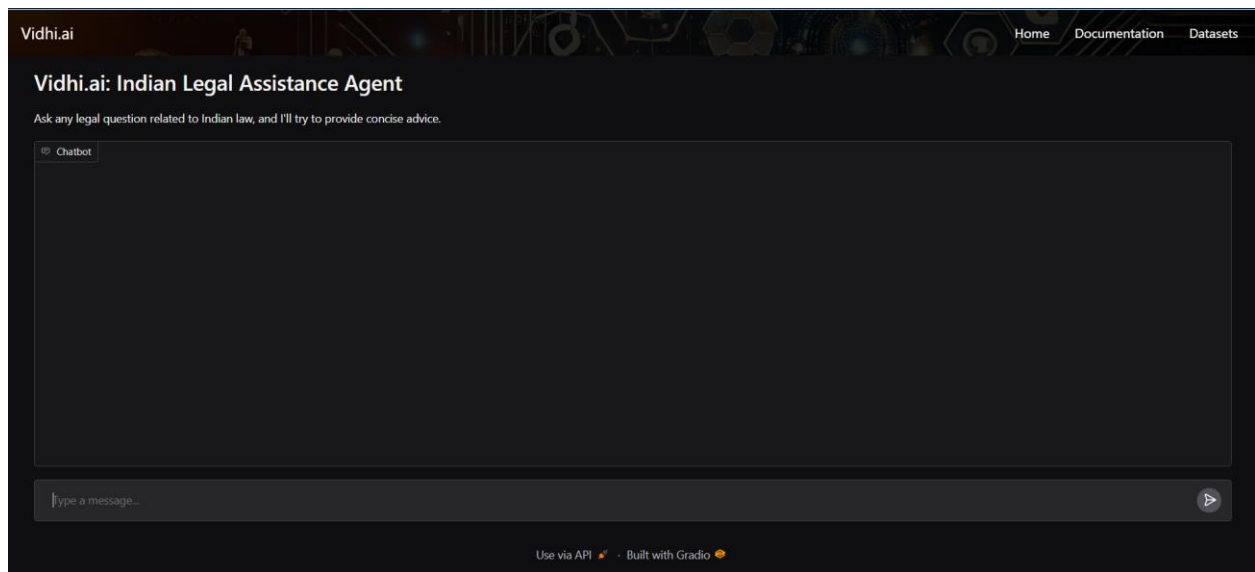


Fig.3. Chat with Vidhi.ai interface

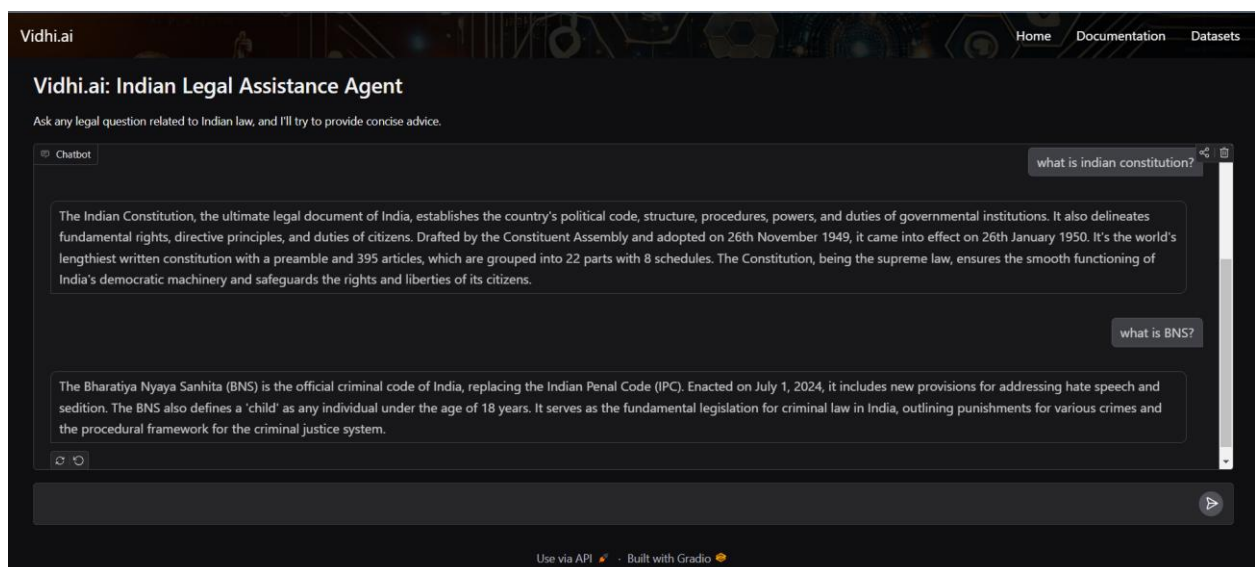


Fig.4. Answering the questions

The Chat App Page of Vidhi.ai is where users can directly interact with our AI-powered legal assistant to receive concise and accurate answers to their legal queries. At the top of the page, the navigation bar provides seamless access to key sections of the platform:

- **Home:** Redirects you to the Welcome Page, where you can explore an overview of Vidhi.ai's features.
- **Documentation:** Takes you to a comprehensive repository of project-related guides, FAQs, legal disclaimers, video tutorials, and presentations.
- **Datasets:** Offers access to critical legal documents, including BNS, BNSS, BSA, and Constitution of India, as well as a distraction-free search engine for law-related articles from trusted websites.

On this page, you can directly chat with Vidhi.ai to get answers to your legal questions, whether they relate to recent legal reforms or foundational laws. However, users are kindly advised to be mindful of the following constraints:

- **Response Time:** Since the project is **deployed on Hugging Face Spaces using CPU services**, response times may be delayed, averaging approximately **10 seconds** per query. We appreciate your patience and understanding as Vidhi.ai processes your requests.
- **Concise Answers:** To manage the token limitations of GPT-4, we have optimized Vidhi.ai to deliver concise yet informative responses. While the answers are brief, we ensure they include all essential details relevant to your query.

Despite these **computational limits**, Vidhi.ai is committed to providing accurate and efficient legal assistance, leveraging the latest advancements in Retrieval-Augmented Generation (RAG) and up-to-date knowledge bases.

Based on feedbacks we receive for this project, we will move further to use GPU or TPU to reduce the response time in seconds or even fraction of second. Also based on feedbacks we will ensure to use model which have relatively high token limit like DeepSeek models.

Chat with your Legal PDF:

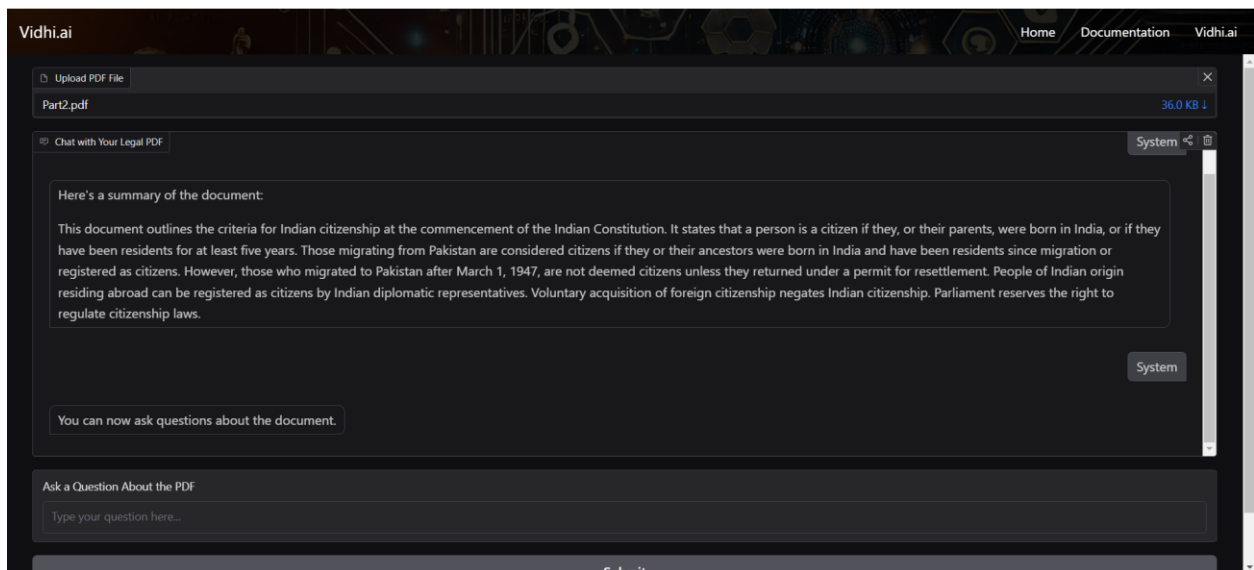


Fig.5.: Chat with your Legal PDF interface

The Chat with Your Legal PDF Page provides an intuitive interface for users to upload legal PDF documents and engage in interactive conversations to better understand the document's content. The interface is similar to the Vidhi.ai Chat App, with a user-friendly navigation bar for seamless exploration:

- **Home:** Redirects you to the Welcome Page, where you can explore Vidhi.ai's features.
- **Documentation:** Offers access to a repository of project-related guides, FAQs, legal disclaimers, and video tutorials.
- **Datasets:** Provides access to critical legal texts, such as BNS, BNSS, BSA, and Constitution of India, along with a law-focused search engine for distraction-free

articles.

Key Features of the Page:

- **Upload Your PDF:** Users can upload lightweight PDF documents, such as contracts, case files, or legal notices, for analysis. The system is designed to handle smaller PDFs efficiently, ensuring compatibility with GPT-4's token limits.
- **Automatic Document Summary:** As soon as you upload a PDF, the system will automatically generate a concise summary of the document. This feature provides a quick overview of the document's key points, saving you time and effort.
- **Interactive Chat with the PDF:** Once the document is uploaded, you can chat directly with the system to ask specific questions about the content of your PDF. This makes it easier to locate information, clarify legal jargon, or gain a better understanding of complex sections.

Notes for Optimal Use:

Due to GPT-4's token limits, **it is recommended to use lightweight PDF files** to ensure smooth processing and complete responses.

As with the Vidhi.ai Chat App, responses may take an **average of 10-15 seconds** to generate, given that the project is deployed on Hugging Face Spaces with CPU services. We appreciate your patience during this process.

Datasets:

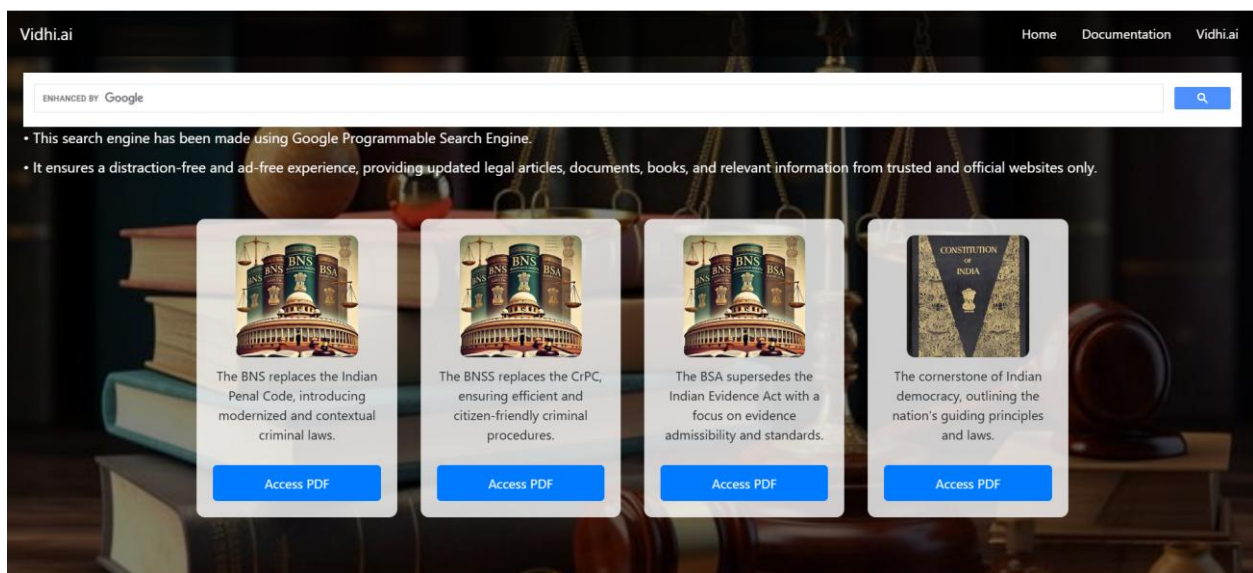


Fig.6: Datasets page

The Dataset Page of Vidhi.ai is a centralized hub for accessing critical legal resources and conducting research on Indian laws. This page is designed to provide users with comprehensive legal datasets and a distraction-free search experience, enabling deeper insights into the legal framework. The navigation bar at the top ensures easy access to other key sections:

- **Home:** Redirects you to the Welcome Page for an overview of Vidhi.ai's features.
- **Documentation:** Provides detailed guides, FAQs, project descriptions, and video tutorials for seamless navigation and understanding of Vidhi.ai.

Features of the Dataset Page:

- **Search Engine:** The search engine is built using Google's Programmable Search Engine and is tailored to retrieve ad-free, distraction-free, law-related articles from trusted websites.
- This feature ensures that users get relevant and reliable information without sifting through unnecessary or irrelevant content.
- It is particularly useful for legal research, finding commentary on specific laws, or exploring recent legal updates.
- **Access to the full text of India's updated legal framework**, including:
 - BNS (Bharatiya Nyay Sanhita) – replacing the Indian Penal Code (IPC).
 - BNSS (Bharatiya Nagarik Suraksha Sanhita) – replacing the Criminal Procedure Code (CrPC).
 - BSA (Bharatiya Sakshya Adhiniyam) – replacing the Indian Evidence Act.
 - Constitution of India (COI) – the foundational legal document of India.

These documents are presented in an easily readable format, allowing users to quickly locate sections or clauses relevant to their queries.

Use Case:

Whether you are a legal professional, student, or researcher, the Dataset Page simplifies the process of accessing authoritative legal documents and searching for additional insights. The integration of trusted sources ensures accuracy, while the curated design eliminates distractions, letting users focus on the information that matters.