

## | RAG LAW

# RAG System for Indian Supreme Court Judgements: Empowering Legal Research and Enhancing Access to Justice

## Project Overview

In the rapidly evolving landscape of legal technology in India, our innovative Retrieval-Augmented Generation (RAG) system stands out as a powerful tool designed to revolutionise legal research. By leveraging the advanced capabilities of Snowflake Cortex Search and Mistral 7B, this project aims to provide comprehensive access to Indian Supreme Court judgements, empowering new advocates, law students, and the broader legal community.

## Technical Foundation

### RAG: Enhancing AI with Contextual Knowledge

At the core of our system lies the RAG framework, a cutting-edge approach that combines the power of large language models with efficient information retrieval. This integration allows for more accurate and contextually relevant responses, grounding AI-generated content in specific, authoritative legal documents. Key components of our RAG system include:

1. **Retriever**: This component searches through our extensive database of Supreme Court judgements, utilising both vector search for semantic similarity and keyword search for lexical precision.
2. **Generator**: We employ the Mistral 7B model, a state-of-the-art language model known for its prowess in text generation and classification. This model synthesizes retrieved information into coherent, contextually relevant responses.
3. **Prompt Augmentation**: The system dynamically enhances user queries with relevant legal context, ensuring that the generated responses are both accurate and tailored to the specific legal domain.

### Snowflake Cortex Search: Powering Efficient Retrieval Our choice of Snowflake Cortex Search as the underlying platform brings several advantages:

- **Hybrid Retrieval**: The system combines vector and keyword search methods, optimising retrieval quality through semantic re-ranking.

- **Managed Service:** Automated creation of embedding and indexes simplifies deployment and maintenance.
- **Security and Governance:** Robust security features ensure that sensitive legal data remains protected within Snowflake's secure environment.

## Comprehensive Legal Database

Our RAG system incorporates a rich database of Indian Supreme Court judgements dating back to 1950. Each entry includes crucial details such as:

- Diary number
- Case title
- Bench composition
- Petitioner and recipient information
- Full judgement text

This comprehensive collection allows users to trace the evolution of legal interpretations over time, providing invaluable historical context to current legal issues.

## Societal Impact and Benefits

### Enhancing Access to Justice

By providing a user-friendly platform for legal research, our RAG system plays a crucial role in bridging the gap between complex legal jargon and public understanding. This improved accessibility is vital for ensuring that individuals are well-informed about their rights and legal options.

### Empowering Legal Professionals

1. **Efficient Research:** New advocates and law students can quickly find relevant case law, understand legal arguments, and grasp the implications of specific rulings.
2. **Contextual Insights:** The system provides citations and references to related cases, offering a broader understanding of the legal landscape beyond simple search results.
3. **Addressing Research Challenges:** Our system directly addresses many of the challenges faced by new legal professionals, such as access to resources, data analysis, and the need for continuous learning.

### Fostering Legal Literacy

As more legal professionals become proficient in utilizing the system, overall legal literacy in society improves. This leads to better advocacy, more informed citizens, and ultimately, a more just society.

## Technological Integration in Legal Practice

Our project aligns with the growing trend of legal tech adoption in India. By introducing advanced AI and retrieval technologies, we contribute to the digital transformation of the legal sector, which is projected to reach a market value of \$304 million by 2026.

### Practical Applications To demonstrate the system's capabilities, consider the following use cases:

1. **Constitutional Law Research:** "Find cases related to Article 21 that discuss the right to privacy."
2. **Case History Analysis:** "Show all judgements involving [specific case title] and their citations."
3. **Environmental Law Trends:** "What are the landmark judgements on environmental law from 2000 onwards?" These examples showcase the system's ability to handle complex queries and provide comprehensive, contextually relevant information.

## Conclusion

Our RAG system for Indian Supreme Court judgements represents a significant step forward in legal technology. By combining advanced AI capabilities with a rich historical database, we're not just creating a search engine – we're building a powerful tool that enhances legal research, empowers professionals, and contributes to a more informed and just society. As we continue to refine and expand this system, we envision it playing a crucial role in shaping the future of legal practice in India. By addressing the challenges faced by new advocates and law students, and by aligning with the broader trends of legal tech adoption, our project stands at the forefront of innovation in the Indian legal sector.