

# Kunal Roy Choudhury

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## EXPERIENCE

### Software Developer

April 2025 – Present

*Indian Kanoon*

*Bengaluru, Karnataka*

- Built a **production-grade full-stack legal tech platform** using **Django, React, PostgreSQL**, and **Redis**, integrating **Google Gemini LLM** to power **10+ tools** including RAG-powered legal chat, document generation (80+ templates), and case law retrieval for **5,000+ concurrent users**.
- Engineered an **LLM-powered RAG system** leveraging **PostgreSQL text search vectors** with **query expansion algorithms** and context extraction, achieving **15% improvement** in legal search relevance, **92% query accuracy**, and **40% reduction** in latency through **Redis caching** and database optimization.
- Developed **scalable OCR pipelines** using **Tesseract** with **batch processing** for PDF, DOCX, and TXT formats via **Celery async processing**, processing **500+ legal documents** monthly.
- Designed **scalable RESTful API architecture** with **versioned endpoints** and **rate limiting**, connecting document processing services with **PostgreSQL-backed** search platform across modules.

### Software Engineer Intern

Sept 2024 – April 2025

*Chargebee*

*Chennai, Tamil Nadu*

- Optimized **data migration pipelines** with **JOOQ-powered scheduler jobs**, reducing query execution time by **45%** and processing **2M+ customer records** daily across **50+ database tables**.
- Built **customer data migration framework** leveraging **environment properties** for Business Entity mapping, migrating **500K+ subscriptions** with **zero downtime** during production cutover.
- Integrated an **adaptive migration validation system** in **Vue.js**, improving Multi-Business Entity configuration accuracy and reducing validation errors by **60%**.

### Software Engineer Intern

Jan 2024 – Sept 2024

*AiDash*

*Bengaluru, Karnataka*

- Architected a **Java microservices framework** using **Hexagonal Architecture** and **Spring Boot**, decomposing a **2M+ LOC monolith** into independent services with improved fault tolerance and **60% faster** feature rollout.
- Revamped a **scalable SQL pagination system** with query optimization techniques, enhancing performance by **25%** and supporting pagination of **100K+ records** with sub-second response times.

## PROJECTS

### Gostman | Go, Bubble Tea, REST APIs, JSON

[link](#)

- Built a **terminal-based API client** enabling developers to manage HTTP requests from CLI, eliminating GUI context-switching with environment variables and persistent workflow storage across development environments.
- Architected an **interactive keyboard-driven interface** supporting GET, POST, PUT, DELETE methods with **real-time response visualization**—a lightweight and efficient Postman alternative for CLI-first developers.

### Servants of Knowledge | Python, Django, OCR, Tesseract, OpenCV, Docker

[link](#)

- Engineered a **book digitization pipeline** processing 1000+ pages into searchable PDFs with multi-language OCR, **reducing manual intervention by 75%** through advanced image processing (cropping, deskewing, dewarping).
- Built a **Django web interface** with **batch automation** and Internet Archive integration, enabling non-technical users to upload, configure, monitor, and preview document processing workflows in **real-time effortlessly**.

## TECHNICAL SKILLS

**Generative AI/LLM:** RAG systems, Google Gemini, LangChain, vector embeddings

**Programming Languages:** Python, Java, JavaScript, TypeScript, SQL

**Backend & APIs:** Django, Spring Boot, Express.js, RESTful APIs, GraphQL, async task processing (Celery)

**Frontend:** React, Vue.js, Redux, Material-UI, Tailwind CSS

**Databases:** PostgreSQL, MongoDB, Redis, MySQL, SQLite

**Search & Data:** Elasticsearch, PostgreSQL text search, OCR (Tesseract)

## EDUCATION

### SRM Institute of Science and Technology

*Bachelor of Technology in Computer Science and Engineering; CGPA: 9.24*

Kattankulathur, Tamil Nadu

*Aug. 2020 – Sept 2024*