Kavya Sridhar

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EDUCATION

University of California, San Diego – La Jolla, CA *Mar 2026*
Master of Science, Data Science

GPA 3.916/4.0 | Relevant Coursework: Recommender Systems, Data Mining, NLP, Machine Learning, Statistical Models, Probability and Statistics, Linear Algebra

College of Engineering Guindy, Anna University – Chennai, India *Apr 2023*
Bachelor of Engineering in Computer Science and Engineering

GPA 3.98/4.0 Relevant Coursework: Machine Learning, Deep Learning, DBMS, Data Structures and Algorithm, Object Oriented Programming in **C/C++**.

EXPERIENCE

Software Engineer – – Société Générale Global Solution Centre *Jul 2023 – Aug 2024 | Chennai, India*
- Built and optimized SQL-based CI/CD pipelines in Palantir Foundry by integrating ML models, automating manual validation workflows to reduce AML transaction query processing time by **20%** and eliminate the need for additional compliance staffing.
- Built internal engineering tools and dashboards for tracking AML alert classifications with real-time filtering and automated triggers, identifying repetitive manual tasks and eliminating them entirely to improve compliance team efficiency by **50%**.
- Developed Python-based automation scripts and Spark transformations for 2 AML business units, integrating automated tests into **Jenkins** CI/CD workflows and reducing data processing time by **40%**.
- Collaborated with cross-functional engineering teams in technical design reviews for migrating 7 critical AML datasets from Palantir OSv1 to OSv2, translating complex workflow requirements into code that resolved schema incompatibilities and transferred 50M+ records with zero data loss.
- Developed and maintained a full-stack web-based internal platform using HTML, CSS, and JavaScript, building both backend logic and frontend interfaces to serve **200+** employees daily and reduce policy lookup time by **60%**.

PROJECTS

HemsHappen App RAG-Based Medical Chatbot | GitHub *Aug 2025 – Present*
- Developed a RAG-based medical chatbot using FAISS vector search and Claude Sonnet 4 over curated GI clinical guidelines, evaluated across medical accuracy, safety, and patient communication by LLM-as-judge and human experts.
- Achieved a **100%** clinical safety pass rate on 38 real-world patient queries, outperforming the Med42-8B baseline by **42 percentage points** as validated by board-certified gastroenterologists.
- Currently architecting the integration of the RAG model with patient-generated data from the HemsHappen app to enable personalized, real-time clinical insights.
- Accepted for presentation at Digestive Disease Week (DDW) 2025.

SplitRight - Expense Splitting PWA for Roommates | Demo *Mar 2025 – Apr 2025*
- Built a full-stack Progressive Web App using **Next.js 14 (App Router)** and **Tailwind CSS** with a **Node.js/Express** REST API and **PostgreSQL**, deployed via Vercel and Railway.
- Engineered a debt simplification algorithm to minimize transaction volume for group expenses, supporting equal, custom, and percentage-based splits.
- Implemented secure **JWT authentication** with httpOnly cookies and real-time balance tracking for roommate expense management.
- Configured full PWA support with service workers and web manifests, enabling a native app experience on iOS/Android with offline detection.

LegalInsight, Self-RAG Legal Contract Analyzer | Demo *Oct 2024 – Dec 2024*
- Developed a legal contract analysis tool using Self-RAG with EigenScore validation for hallucination detection, implementing a Flask backend and LangChain-powered frontend for semantic search across 6,858 LegalBench-RAG queries.
- Implemented client-side document processing using LangChain.js, leveraging RecursiveCharacterTextSplitter for hierarchical contract chunking to improve token efficiency by **16.2%** and ChatPromptTemplate for structured JSON key-term extraction.
- Achieved **74.65%** semantic consistency in AI-generated contract reviews and **4.26x** faster review time compared to manual analysis across multiple LLM providers.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, HTML/CSS, React, Next.js, Node.js, Express, C/C++ (Debugging & Optimization)

Data Engineering & Databases: SQL, Apache Spark, Hadoop, FAISS, PostgreSQL

Machine Learning & AI: PyTorch, TensorFlow, LLMs, RAG, Adversarial Training, Skater, LangChain, LightGBM, Scikit-learn

Cloud & DevOps: Git, GitHub, AWS (S3), CI/CD, Docker, FastAPI, MLflow