

Gokul Viswanathan

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Engineer passionate about building intelligent, reliable systems that blend enterprise-grade robustness with modern AI. Experienced in developing scalable LLM applications, RAG pipelines, and validation frameworks for complex, high-stakes environments.

EXPERIENCE

Software Engineer | Patton Labs 11/2024 - Present

- Built a **rule-based and LLM-driven data validator** for heterogeneous sources (DB, CSV, Excel) ensuring schema consistency and clinical data accuracy, reducing manual QA effort by **60%**.
- Engineered **context memory management** by summarizing long conversation histories and caching embeddings, improving token efficiency and reducing prompt size by **35%** while preserving contextual accuracy.
- Implemented **async communication** with **Kafka** between microservices by redesigning synchronous API dependencies into event driven architecture, reducing system load and eliminating blocking call timeouts that caused processing errors.

Technologies: Python, LangChain, OpenAI API, Pinecone, TypeScript, Pandas, React, MongoDB, Kafka.

Software Engineer | Stealth Startup 03/2024 - 10/2024

SAGE MONEY: Early stage **fintech application** for transaction analysis and family budget management.

- Architected multi-tenant system with **role based access control** for family account sharing, implementing secure authentication flow with **OAuth 2.0** and encrypted storage of sensitive financial data using AES-256.
- Integrated **Plaid API** for bank connectivity, building transaction synchronization pipeline that processed and categorized transactions using rule based logic for subscription detection and spending analysis.
- Developed **RESTful API** with Node.js/Express and PostgreSQL database schema optimized for multi-account queries.

Technologies: TypeScript, React Native, Expo, NodeJS, ExpressJs, Ava, Postgres, Redis, DigitalOcean.

Software Engineer | Accenture 06/2019 - 07/2022

REGISTRATION PORTAL: An enterprise scale **COVID site and employee management platform** handling **50K+** daily **Active Users** across 300+ office locations with 99.9% uptime.

- Streamlined automated approval workflow system reducing processing time from **24 hours to 10 minutes**, resulting in **85% improvement** in employee satisfaction and **40% reduction** in administrative overhead.
- Built **real time contact tracing service** using **event driven architecture** to process **5K+** daily proximity events, identifying and notifying **1,000+** potential exposures within 15 minutes of confirmed cases
- Automated **secure vaccination tracking** system with **AWS S3** document storage and ensuring HIPAA compliance.
- Integrated Apple Wallet pass generation system processing **3K+ daily passes**, reducing **authorization time**.
- Enhanced suite of **20+ RESTful APIs**, handling **100K+ daily requests** with optimized performance.
- Engineered **analytics dashboard** providing live office capacity visualization for **300+** locations.

Technologies: Javascript, React, Redux, Jest, Java, Springboot, AWS, JUnit, Mockito, Postgres.

TECHNICAL SKILLS

Languages & Databases: Java, Python, GoLang, Rust, TypeScript, MongoDB, PostgreSQL

Frameworks: Spring Boot, Flask, ReactJS, NodeJS, ExpressJS, PyTorch, Gin, Tailwind, Redux, Zustand

Cloud & Tools: GCP, AWS, DigitalOcean, Docker, Git, Maven, Github Actions.

Certifications: [SQL for Data Analysis](#), “[Learning Kubernetes](#)” by Kim Schlesinger

PROJECTS

[Though Ink](#) | GoLang, Gin, Typescript, React.Js, Next.JS, Zustand, Tailwindcss

Current

- Built AI powered notes app using Gemini API for summarization and GitHub API for file storage, enabling intelligent note management with cloud persistence.

[Rust-based Data Anonymizer Library](#) | Rust, Python, Regex, spaCy, UUID

2025

- Built a **Rust-based anonymization library** combining **regex** and **NER** for entity detection and UUID-based replacement, with **Python** and **JavaScript** wrappers for RAG pipelines and LLM preprocessing workflows.

EDUCATION

Master's of Science (Engineering Science), University at Buffalo

08/2022 - 01/2024

Course work: Machine Learning, Reinforcement Learning, Computer Vision & Robotic Algorithm

Bachelor's of Technology (Information Technology), Anna University

07/2015 - 04/2019

Course work: Cloud Computing, Machine learning, Data Structures & Algorithms