VIVEK RAJKUMAR SARNAIK

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Software Engineer with 2+ years of experience developing scalable software solutions using Python, Java, React, Go, and AWS. Strong foundation in full-stack development, distributed systems, and cloud computing.

TECHNICAL SKILLS

Languages: Python, Go, JavaScript, TypeScript, Java, SQL
Frontend: React, Next.js, HTML, CSS, Tailwind CSS
Backend: FastAPI, Flask, Django, Node.js, Express.js, gRPC, REST APIs
Cloud & DevOps: AWS (EC2, S3, RDS, Lambda), Docker, Jenkins, GitHub Actions, CI/CD
Databases: PostgreSQL, MySQL, MongoDB, Redis
Tools: Git, GitHub, Linux, Postman, Jira

EXPERIENCE

Full-Stack Developer, *SkillShare, Remote, USA* **June 2024 - Dec 2025**

- Optimized front-end architecture of an SEO-driven learning platform using **React, Next.js (SSR), and Redux**, reducing page load times by 35% through server-side rendering and performance optimization techniques.
- Developed RESTful APIs using **Django** and **Node.js**, **optimizing PostgreSQL schemas** and **query execution** to support high-volume user, course, and payment workflows.
- Engineered authentication and authorization mechanisms using **JWT and OAuth 2.0**, implementing centralized validation and role-based access controls across multiple application modules.
- Developed payment and notification workflows using **Stripe and SendGrid APIs**, enabling automated billing, transactional email delivery, and payment status notifications.
- **Containerized application services** with **Docker** and **implemented CI/CD pipelines** using **GitHub Actions**, streamlining deployment workflows and reducing release cycles by 60%.

Software Engineer, Genpact, Pune, India **Dec 2020 - Dec 2021**

- Developed core microservices for a high-volume financial asset platform using **Python (FastAPI/Flask)** and **Node.js**, decoupling monolithic booking flows into scalable background processes.
- Built interactive web applications using **React.js** and **Next.js**, leveraging reusable component libraries and server-side rendering to improve performance and maintainability.
- Refined **PostgreSQL** query performance via strategic indexing, connection pooling, and execution plan analysis, decreasing database latency by 40% and maximizing transaction throughput.
- Collaborated with product managers and QA teams in Agile/Scrum environments **to deliver customer-facing features** and backend enhancements across multiple release cycles.

PROJECTS

gRPC ChatHub|Go, gRPC, Protocol Buffers, Docker (*Link*)

- Designed a **distributed**, real-time messaging application in **Go** utilizing **gRPC** bidirectional streaming to maintain low-latency communication across concurrent client connections.
- Implemented **goroutines, channels, and thread-safe connection management** to support concurrent message delivery across **multiple clients.**
- Containerized services with **Docker and Protocol Buffers**, enabling reproducible deployments and efficient cross-service communication.

Distributed Job Scheduler|Python, FastAPI, Redis, PostgreSQL, Docker

- Developed an asynchronous task processing system using FastAPI, Redis, and PostgreSQL to offload resource-intensive workloads from the primary application flow.
- **Implemented an orchestration layer using Redis** as a message broker, integrating **exponential backoff retry mechanisms** and status tracking to guarantee fault tolerance.
- Designed worker scheduling and task persistence mechanisms to support reliable execution and recovery of failed jobs.

AI Code Review Assistant | Python, FastAPI, React, PostgreSQL, OpenAI API

- Built an AI-powered code review platform that analyzes source code using **LLMs** to detect bugs, security vulnerabilities, and performance issues while providing actionable improvement suggestions.
- Developed a scalable full-stack architecture with **FastAPI, React, and PostgreSQL**, supporting asynchronous review processing, review history tracking, and concurrent user requests.
- Implemented **prompt engineering** and **structured response generation techniques** to provide consistent and explainable code review recommendations across multiple programming languages.

EDUCATION

M.S. in Information Science|Trine University **June 2024 - May 2026**
M.S. in Computer Science|The University of Texas at Arlington **Jan 2022 - May 2024**
B.E. in Computer Engineering|Savitribai Phule Pune University **Aug 2018 - April 2021**