SUSHANTH K.S.

Software Engineer

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EDUCATION

Bachelor of Technology in Information Technology   Sep 2023 – May 2027 (Expected)

Sri Krishna College of Engineering and Technology, Coimbatore, India   *CGPA: 8.11 / 10.0*

Relevant Coursework: Distributed Systems, Multi-Agent AI Systems, Operating Systems, Advanced Algorithms, Computer Networks, Database Management Systems.

TECHNICAL SKILLS

Languages: Go, Python, Java, JavaScript, JavaScript, TypeScript, Rust, SQL
Frontend: ReactJS, NextJS, Angular
Backend Spring Boot, Node.js, Express, FastAPI, Django
Databases: PostgreSQL, MySQL, Redis, MongoDB, VectorDB (ChromaDB, PineCone)
Systems & Tools: AWS, Git, Docker, Kubernetes, CI/CD, Github Actions, Linux, Kafka
Testing & Quality : JUnit, Mockito, pytest, Selenium, CI Coverage Gates
Concepts: Generative AI (RAG, Agents), Distributed Systems, Concurrency, CRDTs, Low-Latency Arch

EXPERIENCE

Elevate Labs   June 2025 – July 2025

Data Analyst Intern   *Remote*

- Automated data extraction workflows using Python scripts, eliminating manual reporting and saving the engineering team 15+ hours per week.
- Optimized complex SQL queries for the main analytics dashboard, reducing report generation time from 5 minutes to 30 seconds.
- Built internal developer tools including a PostgreSQL query explorer to visualize data inconsistencies, improving data integrity by 20%.

PROJECTS

SmartInox: AI-Powered Email Triage Agent | *Python, LangChain, OpenAI API, Vector DB*

- Engineered a context-aware AI Agent capable of categorizing and drafting responses to emails, mirroring productivity features found in modern suites like Superhuman.
- Implemented a Retrieval-Augmented Generation (RAG) pipeline to ground LLM responses in user historical data, reducing hallucination rates by 40%.
- Optimized context window usage to reduce API token costs by 30% while maintaining response accuracy for long threads.

Go-Scale: High-Performance In-Memory Key-Value Store | *Go (Golang), TCP, Multithreading*

- Built a highly concurrent, thread-safe key-value store from scratch (Redis-compatible) to handle high-throughput workloads.
- Implemented a custom RESP (Redis Serialization Protocol) parser to handle client-server communication directly over TCP sockets without external dependencies.
- Achieved a throughput of 50,000+ requests per second with sub-millisecond latency by utilizing Go routines and Mutex locks for granular concurrency control.

Collaborate-Live: Real-Time CRDT Text Editor | *TypeScript, WebSockets, Rust (WASM)*

- Developed a collaborative text editor allowing multiple users to edit documents simultaneously without conflict, similar to Coda or Google Docs.
- Implemented Conflict-free Replicated Data Types (CRDTs) to ensure eventual consistency across distributed clients without central locking.
- Reduced network overhead by 60% by compressing synchronization states using Rust compiled to WebAssembly.

ACHIEVEMENTS & OPEN SOURCE

Certifications: AWS Certified Developer Associate, Google Cloud Fundamentals, DeepLearning.AI: Multi-Agent Systems
Open Source: Contributed performance patches to **TaiPy**, **LangChain** (AI orchestration) and **FastAPI**.
Problem Solving: Solved 250+ DSA problems on LeetCode/CodeForces; specialized in Graph algorithms and performance constraints.
Developer Tools: Built custom load-testing tools and a job-queue visualizer to debug distributed system workflows.