

RAKSHITH S

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EXPERIENCE

Siemens Healthineers

Software Engineer 1

Bangalore, India

July 2023 – Present

- **Architected and optimized high-throughput distributed services** (C++/Go) handling **10+ TBs** of streaming data daily; engineered custom memory allocators and lock-free structures to reduce latency by **40%**.
- **Established robust fault-tolerance mechanisms** including circuit breakers and exponential backoff, ensuring **99.99%** system availability and eliminating data loss during peak loads.
- **Built scalable ingestion pipelines** and storage layers; tuned I/O patterns to increase throughput by **3x** and reduced storage costs by **25%** via efficient data validation.
- **Enhanced system observability** with distributed tracing and structured logging; developed internal CLI tools that automated recovery, reducing MTTR by **50%** and boosting velocity.
- **Orchestrated containerized microservices deployments** on Linux/Azure, accelerating release cycles by **20%** via Agile delivery.

Siemens Healthineers

Software Engineer Intern

Bangalore, India

February 2023 – July 2023

- Developed **REST APIs** and data models in C#; contributed to ingestion/validation modules and unit/integration tests.
- Automated developer workflows and CI tasks; participated in **synchronous code/design reviews**, improving maintainability and on-time delivery; achieved **60%** process time savings.

Beneath-a-Tree

Techno-Managerial STEM Internship

India

February 2022 – March 2022

- As a team of 4 STEM Trainers in Rural Gujarat for the STEM for Girls initiative, sparking interest in science and research. Planned events, communicated interculturality, and managed resources, logistics and execution.

SKILLS

Languages: C++, Golang, C#, Python, SQL, Bash, PowerShell, C, Java

Distributed Systems: Consistency Models, Sharding, Replication, Consensus Protocols, Fault Tolerance, Microservices

Storage & Data: File Systems (NFS/SMB), Object Storage, Deduplication, Data Protection, PostgreSQL, Redis

High Performance: Multithreading, Lock-free Data Structures, Async I/O, Memory Management, Profiling

Cloud & Tools: Docker, Kubernetes, AWS/Azure, CI/CD, Linux/Windows, Agile/SDLC, System Design

PROJECTS

High-Frequency Order Matching Engine ([Github](#)) | C++, Docker, AWS

- Engineered a low-latency trading engine in **C++** using **lock-free data structures** and custom memory management to minimize GC pauses; achieved sub-millisecond execution times.
- Devised **multithreaded** architecture for concurrent order processing; containerized with Docker for scalable deployment and integrated resilient network I/O with retry policies.

Secure Distributed Storage Utility ([Github](#)) | C++, Python, AES

- Built a secure file storage utility incorporating **AES-256** encryption and block-level deduplication; constructed chunked file processing for handling large datasets efficiently.
- Crafted modular key management and robust error handling for data integrity; refined byte-level I/O performance for high-throughput file operations.

EchoLens – Code Analysis Tool ([Live](#) | [Github](#)) | AI, ML, 3D Visualization

- Created an AI-powered platform that predicts risks, detects technical debt, and visualizes dependencies; deployed ML-based hotspot prediction and semantic commit analysis.
- Developed pipelines for repository analysis; contributed to **architecture/design reviews**; delivered dashboards to guide refactoring and evaluation workflows.

EDUCATION

National Institute of Engineering

B.E in Electronics and Communication Engineering

Mysore, India

August 2019 – July 2023

- Coursework: Computer Networks, Computer Architecture, DBMS, Big Data, Machine Learning, DSA, REST API.
- Language fluency: Kannada, English, Hindi.

CO-CURRICULARS

Xstasis Dance Group: Siemens Healthineers. | **Project Head:** UCSP Research Group, NIE. | **Marketing Head:** Onyx E-Cell, NIE.