

# RAKSHITH S

9741913621 | [rakshiths2001official@gmail.com](mailto:rakshiths2001official@gmail.com) | [LinkedIn](#) | [Github](#) | [Portfolio](#)

## EXPERIENCE

### Siemens Healthineers

Software Engineer 1

Bangalore, India

July 2023 – Present

- Developed high-performance distributed services in C++ and Go; optimized concurrency and memory usage to reduce service latency by 25%.
- Orchestrated resilience patterns like circuit breakers and retries, ensuring consistent system availability and data integrity under high load.
- Enhanced system observability with distributed tracing and built internal CLI tools to automate diagnostics, improving engineering velocity.
- Engineered next-gen Control/Data Plane software in C/C++ for IIoT platforms; optimized BSPs and kernel modules to reduce latency by 25%.
- Implemented L2/L3 networking protocols and device drivers for specialized hardware; ensured 99.99% reliability and secure boot for industrial systems.
- Integrated object storage (AWS S3/Azure Blob) with multipart uploads and checksum validation; increased sustained ingest throughput by 35% and reduced transfer errors by 50%.
- Implemented idempotent ingestion handlers with retries/backoff and deduplication keys to ensure reliable processing under failures; lowered duplicate processing by 90% and improved recovery robustness.

### Siemens Healthineers

Bangalore, India

Software Engineer Intern

February 2023 – July 2023

- Developed REST APIs and data models (C#) with MySQL/Redis; contributed to ingestion/validation modules and unit/integration tests.
- Automated developer workflows and CI tasks; participated in code/design reviews; achieved 60% process time savings and mentored interns; adhered to Agile methodology.

## SKILLS

**Languages:** C, C++, Python, Golang, Bash, Shell, SQL, C#, Java

**IIoT & Networking:** Control/Data Plane, BSP, Device Drivers, Kernel Modules, L2/L3 Protocols, RTOS, PCIe, I2C, SPI

**Core Systems:** Industrial Networking, Switching, Routing, Linux/Unix, Distributed Systems, High-Availability

**Analysis & Dev:** Performance Optimization, Real-time Systems, Traffic Analyzers (IXIA/Sniffer), Debugging, Secure Coding

**Tools & Practices:** Git, CI/CD, Agile/Scrum, Docker, Kubernetes, AWS/Azure, AI-Assisted Development

## PROJECTS

### Low-Latency Networking Engine ([Repo](#)) | C++, Linux, Multithreading

- Engineered a high-performance networking engine in C++ using lock-free data structures and custom memory management; achieved sub-millisecond execution times.
- Devised multithreaded architecture for concurrent order processing; optimized for resource-constrained environments and integrated resilient network I/O with hardware-adjacent retry policies.

### Secure Embedded Storage & Firmware Utility ([Repo](#)) | C/C++, Secure Coding, AES

- Built a secure storage module for embedded systems using AES-256 encryption and block-level deduplication; applied secure coding principles to ensure data integrity for specialized hardware.
- Crafted modular key management and refined byte-level I/O performance for high-throughput, resource-constrained industrial storage operations.

### Industrial Code Analysis Tool ([Live](#) | [Repo](#)) | AI, ML, 3D Visualization

- Created an AI-powered platform that predicts risks, detects technical debt, and visualizes dependencies in large-scale networking codebases; implemented ML-based hotspot prediction.
- Developed pipelines for repository analysis; contributed to architecture/design reviews; delivered dashboards to guide refactoring and evaluation of IIoT software components.

## EDUCATION

### National Institute of Engineering

Mysore, India

B.E in Electronics and Communication Engineering

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.