RAKSHITH S

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EXPERIENCE

Siemens Healthineers — Bangalore, India

Software Engineer 1 — *July 2023 – Present*

- **Developed secure SD-WAN control plane services** in **C** and **C++**; optimized multithreaded and multiprocess environments to reduce latency by **25%**.
- **Implemented advanced security protocols** including **IPsec** and **IKEv2** for encrypted data transmission, ensuring 99.99% availability for critical network infrastructure.
- Engineered **Quantum-Safe encryption modules** to safeguard against Harvest Now, Decrypt Later (HNDL) attacks; increased system resilience by **40%** for high-risk data paths.
- **Provisioned and managed RSA certificates** for secure authentication; automated certificate deployment, reducing mean time to resolution (MTTR) by **50%** for security incidents.
- Applied **secure coding principles** to refactor legacy router software into modular, testable components; improved system scalability and reduced production defects by **20%**.
- **Collaborated cross-functionally** in **Agile** (Scrum/Kanban) settings to design and debug large-scale distributed systems; conducted thorough code reviews for security compliance.
- **Identified and resolved performance bottlenecks** in compute and I/O-bound workloads using advanced profiling tools, improving overall system throughput by **35%**.

Siemens Healthineers — Bangalore, India

Software Engineer Intern — *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. Adhered to **Agile** Methadology.

SKILLS

Languages: C, C++, Golang, Python, Bash, SQL, C#, Java
Networking & Security: VPN, SD-WAN (Catalyst), IPsec, IKEv2, RSA, Post-Quantum Cryptography (PQC), QKD, SSL/TLS
Core Systems: UNIX, IOS, Multithreading, Multiprocessing, Distributed Systems, Microservices, High-Availability
Optimization: Async I/O, Lock-free Data Structures, Memory Management, Performance Profiling, Real-time Systems
Tools & Practices: Secure Coding, Agile (Scrum/Kanban), Git, CI/CD, Docker, Kubernetes, AWS/Azure, AI-Assisted Dev

PROJECTS

Secure SD-WAN Control Plane Engine (Repo) | *C/C++, UNIX, Multithreading*

- Implemented high-performance routing services in C++ using **lock-free data structures** and multithreading for concurrent packet processing; optimized for resource-constrained environments.
- Designed resilient control plane logic with **retry/backoff** mechanisms for secure communication; containerized using Docker for scalable deployment across distributed systems.

Network Security Audit Tool (Live | Repo) | *AI, Python, Security Visualization*

- Developed an AI-powered platform to identify **vulnerabilities**, technical debt, and security risks in large-scale codebases; implemented semantic commit analysis to track security compliance.
- Visualized complex system dependencies to guide refactoring and evaluation workflows; contributed to **architecture and design reviews** for secure software development life cycles (SDLC).

IPsec Tunnel Encryption Utility (Repo) | *Python, AES, Secure Coding*

- Implemented **AES/CBC** encryption with PKCS#7 padding for secure data transmission; designed modular key management and robust error handling to prevent decryption failures.
- Applied **secure coding standards** to build a CLI utility for cryptographic operations; optimized byte-level performance for real-time encryption and decryption tasks.

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.