RAKSHITH S

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EXPERIENCE

Siemens Healthineers — Bangalore, India

Software Engineer 1 — *July 2023 – Present*

- **Developed high-performance distributed microservices** in **Modern C++** and **Go**; optimized concurrency and memory usage to reduce end-to-end latency by **25%**.
- **Implemented resilience patterns** like circuit breakers and retries, ensuring consistent system availability and data integrity under high load.
- **Enhanced 3D visualization pipelines** enabling clinicians to sculpt and manipulate volumetric objects in real-time; optimized visibility and validation feedback across MPR and VRT layouts.
- **Deployed state-of-the-art CV algorithms** for automated lesion planning and segmentation; translated complex requirements into high-design-quality production code with **Modern C++ (17/20)**.
- **Optimized XR-adjacent workloads** on **heterogeneous mobile architectures** (CPUs, GPUs); conducted power/performance analysis and architectural trade-offs to meet resource constraints.
- **Integrated computer vision pipelines** for real-time updates of volume and measurement data; ensured DICOM-compliant storage and accurate save/load behavior for 3D segmentation objects.
- **Oversee code reviews and issue triage** to ensure high quality and velocity; mentored junior engineers on structured debugging and performance profiling in an **Agile/SAFe** environment.

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: Modern C++ (11-20), C, Python, Golang, SQL, Bash, Shell, C#, Java
XR & Computer Vision: AR/VR/MR, Graphics Pipeline, CV Pipelines, Camera Pipelines, HW/SW Partitioning
Core Systems: Android, Linux, RTOS, Multi-core/Heterogeneous Programming (CPU/GPU/DSP/Tensor)
Architecture: Architectural Trade-offs, Power/Performance Analysis, System-on-a-Chip (SoC), Microservices
Tools & Frameworks: OpenCV, Vulkan, OpenGL, Git, CI/CD, Docker, Kubernetes, AWS/Azure, AI-Assisted Dev

PROJECTS

High-Frequency Order Matching Engine (Repo) | *C++, Docker, AWS*

- Implemented high-performance routing and control services in **Modern C++** using **lock-free data structures** and multi-threading for concurrent packet processing; optimized for resource-constrained AR/VR devices.
- Designed resilient system logic with **retry/backoff** mechanisms for secure communication; integrated with hardware-adjacent interfaces to ensure high-velocity data flows in XR platforms.

Secure Distributed Storage Utility (Repo) | *C++, Python, AES*

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

EchoLens – Code Analysis Tool (Live | Repo) | *AI, ML, 3D Visualization*

- 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.