RAKSHITH S

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EXPERIENCE

Siemens Healthineers Bangalore, India

Software Engineer 1 *July 2023 – Present*

- **Developed high-performance distributed microservices** in **C++** and **Go**; optimized concurrency and memory usage to reduce service latency by **25%**.
- **Implemented resilience patterns** like circuit breakers and retries, ensuring consistent system availability and data integrity under high load.
- Enhanced data ingestion modules by **optimizing I/O buffer management**, increasing throughput by **40%** for large datasets.
- Integrated distributed tracing to **improve system observability and built CLI tools** that reduced debugging time for cross-functional teams.
- **Supported containerized microservices** deployments on Linux/Azure and drove Agile delivery
- **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 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++, Golang, C#, Python, SQL, Bash, PowerShell, C, Java
Cloud & Tools: Docker, Kubernetes, AWS/Azure, CI/CD, Linux/Windows, Agile/SDLC, System Design
Distributed Systems: Consistency Models, Sharding, Replication, Consensus Protocols, Fault Tolerance, Microservices
Storage & Data: PostgreSQL, Redis, File Systems (NFS/SMB), Object Storage, Deduplication, Data Protection
High Performance: Multithreading, Lock-free Data Structures, Async I/O, Memory Management, Profiling

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 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.