

Sallar Farokhi

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Experience

Software Developer, HyperAnalytics – San Jose, CA June 2025 – Present

- Architected a local agentic proof-of-concept using LangChain with autonomous tool-use capabilities to synthesize real-time analytics pipelines for HIPAA-compliant healthcare data.
- Implemented structured extraction with Pydantic models and few-shot prompt engineering, leveraging Redis as a vector store for RAG-augmented B2B intelligence retrieval.

Teaching Assistant, Jack Baskin School of Engineering – Santa Cruz, CA Sept 2024 – June 2025

- Mentored 150+ undergraduates in systems-level coursework spanning computer architecture, networking, and kernel-space design.

Software Engineer Intern, Transfreight Marine Services PVT LTD – Remote Sept 2023 – Sept 2024

- Provisioned cloud-native infrastructure leveraging Terraform and Azure DevOps to automate CI/CD pipelines, deploying serverless functions for shipping rate aggregation and schedule optimization.

Projects

SADE: Safety-Aligned Dataset Engine Dec 2024 - Present

- Engineered a composable CLI generation pipeline leveraging LangChain and graph-based RAG to produce 12.3K MITRE ATT&CK-aligned commands, enabling safe, verifiable tool-use for agentic security systems.
- Validated pipeline fidelity using CMDCaliper embeddings and autonomous validation agents, achieving 0.4-0.6 semantic consistency across AWS, Github, and Salesforce command spaces.

KubeFlex: Carbon-Aware Kubernetes Scheduler Dec 2024 - March 2025

- Architected a Kubernetes-native scheduler with carbon-aware workload orchestration, implementing live migration for dynamic placement optimization across distributed regions.
- Achieving 95-99% emission efficiency for day-long workloads, and 2 second migration for workloads.

Locker: Oblivious Datastore for Kubernetes Jan 2025 - March 2025

- Implemented a secure proxy for the etcd using the Waffle protocol, protecting access patterns adversaries in Kubernetes infrastructure with a 22.7% overhead, compared to native etcd operations.

Certifications

Certified Kubernetes Application Developer (CKAD) March 2025

Education

University of California, Santa Cruz, MS in Computer Science Sept 2024 – December 2025

- Coursework: Deep Learning, Cloud Computing, Cybersecurity, Computer Systems

University of California, Santa Cruz, BS in Computer Science Sep 2020 – June 2024

- Coursework: Computer Systems, Distributed Systems, Computer Networking, Cybersecurity

Technologies

Languages: Python, Go, Bash, SQL, C, C++, Java, JavaScript, PHP

Technologies: Docker, Kubernetes, LangChain, Ollama, Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure, Terraform, Grafana, Apache Flink, Nginx, Selenium, Playwright, Redis, PostgreSQL, MySQL