Gian Zignago

Los Angeles, CA | Active TS/SCI Clearance
gianzignago@gmail.com | (314) 780-0913 | linkedin.com/in/zignago

EXPERIENCE

Software Engineer III Feb 2025 – Present
General Atomics *Los Angeles, CA*

- Architected and deployed time-series telemetry database (InfluxDB) for dual-satellite mission, designing schema to optimize query performance for 87+ telemetry parameters across ADCS, EPS, TTC, and Radio subsystems with 120-day raw retention and 400-day rollup capabilities
- Built end-to-end telemetry ingestion pipeline processing real-time satellite downlink data from S3 → parsing (binary/CSV) → InfluxDB → Grafana visualization, enabling operators to diagnose anomalies within minutes instead of hours
- Designed tag-based data model with vehicle, service, and subsystem partitioning that reduced cross-service query times by 85% and enabled instant SV1/SV2 satellite comparisons
- Collaborated cross-functionally with Huntsville flight software team and Boulder mission ops to define telemetry interfaces, S3 bucket structures, and data flow conventions for dual ground station uplink/downlink operations

Software Engineer II May 2023 – Dec 2024
Cisco *San Francisco, CA*

- Architected real-time telemetry aggregation pipeline processing device health metrics from 100K+ distributed network devices at 10K+ events/second using Kafka, Python, and TimescaleDB
- Built scalable backend services for cloud management platform, implementing RESTful APIs and microservices architecture with 99.9% uptime serving 10K+ customer organizations
- Designed and deployed CI/CD pipelines using Jenkins and GitLab, implementing automated testing and canary deployments that reduced deployment cycle time by 60% and improved release reliability
- Implemented monitoring and alerting infrastructure using Prometheus, reducing MTTR for production incidents by 8%
- Optimized time-series database performance for telemetry storage, redesigning indexing and retention policies to reduce query times by 70% while handling 500GB+ daily data ingestion

Software Engineer Intern May 2022 – Aug 2022
Johns Hopkins University Applied Physics Laboratory *Laurel, MD*

- Built automated testing infrastructure for autonomous flight systems, developing Python test frameworks that reduced vehicle dynamics validation cycle time from days to hours
- Developed C++ real-time simulation environment integrated with hardware-in-the-loop (HWIL) test systems, enabling early detection of integration issues before costly physical testing and reducing development iteration time by 30%

Software Engineer Intern May 2021 – Aug 2021
SpaceX *Hawthorne, CA*

- Built network emulation platform for Starshield, enabling simulation of 100+ satellite constellation networks at Gbps line rates without requiring hardware testbeds, reducing integration costs by $100K+ per test campaign
- Developed Linux traffic control and priority queueing system for multi-tenant satellite network simulation, enabling realistic modeling of network congestion and Quality-of-Service constraints for mission-critical vs. bulk data transfers

TECHNICAL SKILLS

Programming Languages: Python, C++, Ruby, Java, Go
Skills: InfluxDB, Grafana, Docker, Git, Linux, Bitbucket, Prometheus, AWS GovCloud, S3, EC2, Lambda, Podman, SQL
Skills plus: Kubernetes, TensorFlow, PyTorch, PostgreSQL, MongoDB, Redis, Terraform, MySQL

EDUCATION

Master of Science in Computer Science | University of California, Los Angeles (UCLA) Dec 2024
Bachelor of Science in Computer Science | University of Missouri May 2023