Gian Zignago

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SKILLS

Programming Languages: Python, C++, Bash, Rust
Technologies: Kubernetes, Docker, InfluxDB, Linux, MySQL, PostgreSQL, Terraform, Kafka, gRPC, Spark, Delta Lake
Tools: Grafana, Prometheus, RabbitMQ, Jenkins, Git, Postman, Jira, GitLab CI/CD, AWS GovCloud, PyTorch

SECURITY CLEARANCE

Security Clearance: Active DoD Top Secret (TS)/SCI Clearance

WORK EXPERIENCE

Software Engineer III **Feb 2025 – Present**
General Atomics *Denver, CO*

- Built distributed telemetry ingestion pipelines using Kafka and InfluxDB for multi-satellite laser comms demos, slashing query latencies by 35% for real-time monitoring in AWS clusters.
- Architected ML inference pipelines on ground AWS infra for edge autonomy project, deploying PyTorch models for threat detection, enhancing classified image analysis accuracy by 8%
- Ensured telemetry integrity for TS autonomy mission by implementing encrypted S3 storage, IAM-based access isolation, and checksum validation for secure classified data handling under AWS GovCloud constraints.
- Built real-time Grafana dashboards over InfluxDB for 30+ satellite subsystems, enabling sub-second telemetry monitoring.

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

- Managed and scaled large fleets of on-prem Linux servers used for internal build, test, and ML workloads; performed regular diagnostics and performance tuning across compute, network, and storage layers.
- Designed and implemented health monitoring and alerting systems for on-prem compute clusters using Prometheus and custom scripts, ensuring high availability and rapid fault detection.
- Integrated GPU-accelerated systems into on-prem infrastructure to support experimental workloads, working closely with developers to tune for ML inference performance and reliability.

Research Engineer, ML Infrastructure **Aug 2022 – May 2023**
University of Missouri College of Engineering *Columbia, MO*

- Enabled real-time ML on genomic and imaging data by building distributed ETL pipelines using Spark, Argo Workflows, and Delta Lake, improving data accessibility across HPC and cloud by 20%.
- Supported model training for 5+ bioinformatics teams by implementing secure access layers and scalable storage for 30+ TB of microscopy and genomic datasets, reducing data provisioning time by 40%.

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

- Developed real-time 6DOF flight simulation software in C++ for autonomous vehicle guidance and control, reducing integration time by 40% for hardware-in-the-loop testing.
- Integrated Python tools for dynamics validation and GNC test automation, increasing test coverage and regression speed by 3x.

Software Engineer Intern **May 2021 – Aug 2021**
MITRE *McLean, VA*

- Developed internal platform APIs and CLI tooling using Python, gRPC, and Bash for orchestrating autonomous satellite test workflows; integrated Prometheus metrics and GitLab CI triggers, reducing SITL/HITL and live flight integration time by 20%.
- Containerized flight software test runners with Docker, added structured logging via Fluent Bit, and deployed to on-prem Kubernetes clusters; improved CI/CD test reliability and coverage by 15% across automated pipelines.

EDUCATION

University of California, Los Angeles (UCLA) **Sep 2023 – Dec 2024**
Master of Science in Computer Science *Los Angeles, CA*

University of Missouri **Aug 2019 – May 2023**
Bachelor of Science in Computer Science *Columbia, MO*

PROJECTS

LEO CubeSat (M^3) – Dual-Mode Thruster | *C++, Docker, GitLab CI/CD* **Aug 2019 – May 2021**

- Led GNC and comms software for M^3, a 3U CubeSat testing a novel dual-mode chemical/electric thruster.
- Secured $60K CSLI grant, coordinated system readiness reviews, and launched aboard a Falcon 9 for a 13-year mission in LEO.