ALAN ORDORICA

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SOFTWARE ENGINEER | JACK-OF-ALL-STACKS | TECH MAVERICK

PROFESSIONAL SUMMARY

Software engineer with experience at leading technology companies in backend development, cloud computing, system automation, and distributed architectures. Driven to solve complex challenges using an iterative, AI-informed approach to design robust, scalable software and hardware solutions that enhance reliability and foster continuous improvement.

TECHNICAL SKILLS

Languages, Libraries & Frameworks

C/C++ | Python | Go | JavaScript | JSON | Java | SQL | NoSQL | TypeScript | React | Node.js/Express | ESP-IDF | FreeRTOS

Cloud & DevOps

Docker | Kubernetes | Git | Ansible | GCP | Pub/Sub | CMake | Bazel | Splunk | SDN

Embedded Sys

ESP32 | I^2C | SPI | BLE | GDB

WORK EXPERIENCE

Google | GCP Networking — Sunnyvale, CA
Software Engineer | SDN Platform Team — *May 2022 – Dec 2024*

- Drove development of internal Python/C++ load-testing framework, implementing gRPC, protobuff and pub/sub based workflows and components to replicate networking control-plane behavior—reducing test runtimes by **25%** and saving **1.5 SWE-years** via regression detection.
- Spearheaded the design and developement of a VPC gateway and multicast VM controller feature into the framework—extending C++ control-plane emulation and authoring Python orchestration scripts—to replicate the production pub/sub communication between 1k+ VPC gateway components to each multicast VM controller, expanding the scope testing, uncovering critical scalability issues and reducing system bottlenecks by **35%**.
- Automated and maintained critical CI/CD pipeline load-test tasks by provisioning isolated test sandbox containers, creating CRON test monitoring jobs, and scripting metric collection tasks with python and SQL—to reduce release-blocking failures by 30% and accelerate developer feedback loops by **40%**.
- Enhanced the control-plane testing by migrating legacy host VM live migration system to a more scalable pub/sub architecture, boosting system throughput by **20%** and improving test accuracy (reducing false negatives) by **35%**.
- Collaborated with SRE and partner dev's to drive design reviews, brown-bag knowledge-sharing sessions, sprint planning/retrospectives and conducting peer code reviews of Python, C/C++ to improve code quality and team alignment, ensuring over **98%** uptime for critical test grids.

Apple — Sunnyvale, CA
DevOps Engineer Intern | CI Tools-Site Reliability — *July 2020 - March 2021*

- Led a team to design, wire, and deploy 200+ test racks housing 1,000+ devices; defined host configuration strategies for each rack's unique use case, driving a **50%** increase in availability, **30%** reduction in test scheduling wait times, and **20%** boost in overall lab uptime.
- Automated device provisioning and network setup with Python, Bash, and Ansible scripts—flashing firmware at scale and orchestrating batch configurations—to reduce manual setup time by and sustain **97%** lab uptime.
- Developed custom Splunk monitoring and remediation tools, integrating gathered metrics into dashboards and internal alerting systems, enabling real-time detection and auto-recovery of host and device failures, which cut device downtime by **27%** and improved test success rates by **34%**.

Full Stack Developer — Remote
Software Engineer (Contract) — *January 2020 - Present*

- Developed modular React frontend and Node.js backend portfolio web apps with Docker Compose for local orchestration, enabling rapid environment setup.
- Developed Node.js RESTful microservices and ESP32-based automation projects using Python, Bash, and other tools, showcasing proficiency in hardware-software integration and system-level programming.

PROJECT PORTFOLIO

- **GhostPass:** Engineered an embedded solution integrating an RC522 RFID module and SSD1306 Mini OLED with an ESP32S3 via I^2C/SPI in C/C++, delivering a robust prototype for secure access simulations and demonstrating deep hardware–software integration expertise.
- **Lume-finity:** Spearheaded development of a cross-platform Flutter app for Bluetooth-enabled hardware control, implementing BLE communication layers and intuitive UI to streamline IoT device management.
- **Java Interpreter:** Developed Java-based language interpreter, designing lexer, parser, and runtime components to deepen understanding of compiler principles and showcase system-level software engineering skills.
- **CitrusCV:** Designed and delivered a reusable LaTeX resume class and automation scripts, enabling streamlined document generation and highlighting proficiency in domain-specific language design.

EDUCATION

San Francisco State University — San Francisco, CA
Bachelor of Science in Computer Engineering — *December 2019*