
FORWARD DEPLOYED ENGINEER | FULL-STACK & INDUSTRIAL SOFTWARE

Available for full-time onsite work, relocation, and travel.

Full-stack development: React, TypeScript, Python, FastAPI, Rust, PostgreSQL, and REST APIs; customer-facing applications, operational data models, and scheduling.

Delivery & integration: AWS, Docker, Linux, Git, and Nix; data integration, access controls, automated validation, troubleshooting, and operator handoff.

Customer & product work: Requirements discovery, AI-assisted development, workflow automation, engineering tradeoffs, customer feedback, and production-user training.

Professional Experience

Shipyard Operations Software

03/2026 - Present

Software Engineer | O3 World Wide | Shipyard Operations & Planning

- Used agentic coding tools to implement a React/TypeScript planning interface and Rust/Python services backed by PostgreSQL; owned requirements, scheduling logic, historical-replay validation, and deployment.
- Translated planners' installation knowledge into an ontology of tasks, parts, personnel, and shared resources; used OR-Tools CP-SAT to evaluate feasible schedules and downstream disruptions.
- When planners needed late deliveries and unavailable equipment reflected in schedules, extended the dependency model and scheduler; validated changes by replaying historical delays before release.
- O3 and its defense-industry partners began using the planning model as a framework for organizing upcoming shipyards and distributed shipbuilding.

Ibrium Studios

09/2025 - 05/2026

Embedded Systems Engineer | Disney contract

- Worked directly with producers to turn creative intent and production constraints into a multi-axis robotic system, owning custom boards, ARM Cortex-M firmware, CAN control, and digital-twin registration.
- Designed AWS resource cleanup around asset ownership and active sessions because an idle timer alone could interrupt work still in use; tested active and inactive scenarios before enabling shutdown and cleanup.
- Traced intermittent motion-control latency with a logic analyzer to a control-loop deadline overrun; moved scheduling to a fixed-rate timer interrupt and revalidated the sequence.
- Delivered integrated systems under a fixed production deadline; documented operating procedures, explained technical constraints to producers, and trained nontechnical crews.

MedBWS

05/2020 - 06/2023

Automation Lead | Pharmaceutical workflow software

- Built and supported a computer-vision and Swift iOS workflow for pharmaceutical identification and disposal, deployed across hospitals in a HIPAA-compliant environment.
- Translated operational requirements into Java application logic, SQL validation, authorization controls, protected data handling, and audit logging; surfaced conflicting information for review.
- Connected facilities, drivers, and pickup windows with route-cost prediction and constrained planning to support operational scheduling.

Engineering Software and Additional Experience

AI-Assisted Aircraft Design Tool

02/2026 - Present

Software Engineer | O3 World Wide | Aircraft Design & Analysis (AEROS)

- Worked alongside aerospace engineers to translate coupled blended-wing-body requirements into a Python workflow connecting geometry, aerodynamic and structural solvers, and flutter assessment.
- Screened hundreds of payload-specific variants, advanced three finalists to higher-fidelity analysis, and identified a trade-study design with approximately 24% lower structural mass than baseline.
- Retained solver outputs and validation records across analysis stages, checked results against published references, and flagged uncertainty so engineers could assess design changes with supporting evidence.

Counter-UAS Electronic-Warfare Decision Engine

03/2026 - Present

Independent Software Developer | Simulation and replay

- Built a Haskell signal-processing pipeline for synthetic and recorded IQ data; extracted emitter observations and compared constrained response plans against explicit mission state.
- Preserved plan-scoped evidence and confidence-based abstention so recommendations remained reviewable; evaluated behavior through adversarial scenarios and recorded-input replay.
- Used Nix for reproducible build environments and investigation of software behavior against the inputs and decisions that produced it.

Additional Experience

Tata

12/2025 - 02/2026

Field Researcher & Developer | Apple AR/LiDAR research partnership

Conducted AR/LiDAR research across field sites, traveling throughout the engagement to configure sensors and validate captures. Developed C software and repeatable data-collection protocols for consistent indoor scanning.

Saddleback College Robotics

06/2021 - 06/2023

Co-Software Lead | Mars Rover Team

Built React/TypeScript and Foxglove telemetry and waypoint interfaces; co-led ROS 2 rover field trials and Rust/STM32 integration. Used GitHub reviews, simulation, rosbag replay, and Docker to investigate and regression-test changes.

Technical Skills

Languages: TypeScript, Python, Rust, C, C++, Java, Swift, Haskell, Go

Applications & data: React, FastAPI, PostgreSQL, SQL, REST APIs, role-based access, operational ontologies, and OR-Tools CP-SAT

Delivery & validation: AWS, Docker, Linux, Git, Nix, AI-assisted development, automated checks, replay testing, technical documentation, and operator training

Engineering tools: NumPy, SciPy, OpenVSP, CalculiX, ROS 2, ARM Cortex-M, CAN, and logic-analyzer debugging

Coding assessment: CodeSignal Industry Coding Assessment, 600/600, August 2026

Education

Irvine Valley College | Computer Engineering coursework

All A grades in C++, Computer Organization and Assembly, MATLAB, Python, Calculus, Linear Algebra, and Differential Equations. Finalist, CLA Hacks 2023.