

Ian Vazquez

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SUMMARY

Software Engineer II with three years of professional experience developing, testing, and integrating C++ software for real time and hardware connected applications. Background includes Linux, VxWorks, Python, Shell scripting, **requirements analysis**, system integration, laboratory verification, simulators, and test benches. Works closely with Systems Engineers to translate operational needs into practical designs, resolve interface issues, and support software across requirements, architecture, implementation, integration, verification, and maintenance. Applies Agile Scrum, **Test Driven Development**, Git, GitLab, and DevSecOps practices through pipelines with **Static Code Analysis**, Automated Build, Automated Test, and CI/CD controls. Holds an active **U.S. Government Secret Security Clearance** and experience with EO/IR interfaces, mature code bases, legacy maintenance, and multidisciplinary engineering delivery.

EXPERIENCE

Software Engineer II, Real Time Applications

July 2025 - Present

Orion Defense Technologies

Torrance, California

Leads C++ development, integration, verification, and lifecycle support for real time sensor processing across Linux, VxWorks, laboratory hardware, and EO/IR simulation environments. Partners with **Systems Engineers** and Scrum teammates to resolve interface risks, improve delivery controls, and maintain dependable behavior across mature software.

- Developed C++ components for Linux and **VxWorks** sensor processing, preserving deterministic hardware interfaces during integration.
- Integrated an EO/IR simulator with test bench software, resolving timing discrepancies for reliable end to end scenarios.
- Created Python and Shell utilities for configuration, log parsing, and regression execution, reducing recurring integration setup.
- Expanded GitLab CI/CD with **Automated Build**, **Automated Test**, and Static Code Analysis stages before integration events.
- Applied **Test Driven Development** in mature C++ code, pairing unit coverage with runtime **verification** against requirements.
- Investigated legacy defects across software and hardware boundaries, documenting maintainable corrections for release and maintenance work.

Software Engineer I, Embedded Systems

October 2023 - June 2025

Pacific Embedded Systems

Irvine, California

Delivered **C++** software for real time embedded control prototypes, supporting **requirements analysis**, design, implementation, integration, and test on Linux development systems. Contributed within Scrum teams while building repeatable simulator workflows, strengthening continuous integration, and preparing evidence for formal verification.

- Implemented C++ modules for real time control prototypes, translating interface requirements into tested **Linux** software.
- Built Python regression scripts that drove simulator inputs, compared outputs, and created repeatable integration evidence.
- Supported **hardware in the loop** sessions with **test benches**, isolating interface faults before formal verification activities.
- Managed Git and GitLab branches with peer reviews, keeping feature history traceable through Scrum iterations.
- Added automated compilation and test jobs, improving early detection of **integration** failures in an established code base.
- Worked with Systems Engineers to refine operational behavior from design through implementation, integration, and test.

PROJECTS

EO IR Simulator Integration 📅 2025

Worked with Systems Engineers to connect simulator outputs with real time application interfaces. Traced timing and message issues in a shared laboratory setting, helping establish dependable end to end verification scenarios.

Embedded Regression Automation 📅 2024

Built a Python based workflow for simulator inputs, output capture, and expected behavior comparison. Collaboration with peers made recurring integration reviews more consistent and easier to reproduce.

LEADERSHIP & AWARDS

- Received recognition for dependable C++ integration work across Linux, VxWorks, and laboratory hardware environments.
- Earned team trust for resolving mature code base defects and documenting maintainable release corrections.
- Contributed leadership during Scrum integration sessions by helping teammates interpret interface failures and verification evidence.

EDUCATION

Bachelor's Degree in Computer Engineering

2023

California State University, Long Beach GPA: 3.5

Long Beach, California

Coursework: Real Time Systems, Embedded Software, Computer Architecture, Software Engineering

CERTIFICATIONS

- Active U.S. Government Secret Security Clearance 📅 2024
- GitLab CI/CD Associate 📅 2025

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, Shell
- **Operating Systems:** Linux, VxWorks, RTOS
- **Version Control:** Git, GitLab, GitLab repositories
- **CI/CD Platforms:** GitLab CI/CD, Continuous Integration, Continuous Delivery
- **DevSecOps Controls:** Static Code Analysis, Automated Build, Automated Test
- **Testing Methods:** Test Driven Development, Unit Testing, System Testing
- **Integration Environments:** Test benches, Simulators, Hardware in the loop
- **Systems Engineering:** Requirements analysis, Interface design, Operational scenarios
- **Real Time Systems:** Real time applications, Deterministic interfaces, Embedded control
- **Agile Methods:** Scrum, Sprint planning, Peer reviews
- **Defense Systems:** EO/IR systems, Government security clearance, Military systems

SKILLS

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|----------------------|-----------------|-------------------------|---------------------------|
| • C++ | • Linux | • Software integration | • Test Driven Development |
| • Python | • VxWorks | • Hardware test benches | • DevSecOps |
| • Shell scripting | • RTOS | • Simulators | • GitLab |
| • Real time software | • EO/IR systems | • Agile Scrum | |

PROFESSIONAL AFFILIATIONS

- Active participant in multidisciplinary engineering reviews with Systems Engineers, software peers, and laboratory personnel.
- Contributor to Agile Scrum planning, peer review, integration readiness, and continuous improvement discussions.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST