Jonathan Zavala
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Summary

Computer Engineering professional with hands-on experience in system integration, automation, and software development. Skilled in building applications, implementing APIs for data integration, and creating automation tools that improve accuracy and efficiency. Strong background in troubleshooting, technical support, and documenting workflows across manufacturing and IT environments. Actively expanding expertise in networking through pursuit of the Cisco CCNA certification.

Education and Training

California State University, Long Beach
B.S. in Computer Engineering | 2025 | GPA: 3.74

- Two-time President's List honoree, Dean's List honoree

Rio Hondo College
A.S. in Engineering (Pre-Engineering), Mathematics | 2022 | GPA: 3.8

Work Experience

Silicon Forensics | Pomona, CA
System Integration Engineer & Support Technician | August 2024 – Present

- Developed a Kotlin Android app for RF signal strength testing that reduced manual validation time by 60% and improved shielding design decisions.
- Created automated validation tools in C++ that cut manual test errors by 35% and reduced test cycle time by 20%.
- Assisted in customer support by replicating field issues, identifying root causes, and communicating findings to internal teams for resolution.
- Built custom computer systems and servers, ensuring proper assembly, performance verification, and manufacturing process documentation.
- Participated in the documentation of test procedures, failure modes, and support processes to streamline internal handoffs and external reporting.
- Collaborated with cross-functional teams to ensure high-yield production and quality control of hardware builds.

FedEx | Whittier, CA
Forklift Operator | September 2017 – September 2025

- Verified shipments and maintained product organization, contributing to logistics efficiency in a fast-paced manufacturing environment.

Technical Projects

LoRa-Based Sensor Network

- Leading hardware and firmware development of a wireless sensor network for environmental data logging using long-range communication.
- Integrates microcontrollers, low-power design, and real-time data reporting for outdoor deployment.

Embedded Weather Display

- Designed and implemented a real-time weather station using TM4C123, SPI, and Wi-Fi, integrating APIs for continuous data updates.
- Applied modular design and hardware-software integration to deliver a functional embedded system.

Drive Validation Tool

- Built a C++ and Bash-based test automation suit to validate storage device configurations during manufacturing.
- Reduced manual errors and streamlined the production validation process.

Faraday Signal Shielding App

- Designed an Android app to measure and graph RF signal strength for testing product shielding and law enforcement applications.
- Implemented features using Kotlin and Android's signal monitoring APIs.

Skills

- Platforms: VS Code, Android Studio, Jira, LTspice, Altium, KiCAD, Autodesk Fusion, Linux (Kali, Ubuntu), Vivado, Keil, Microsoft Windows, macOS
- Programming & Scripting: Bash, C, C++, C#, Python, PowerShell, MATLAB, Verilog, Kotlin, Assembly
- Tools: Spectrum Analyzers, Signal Generators, Oscilloscopes, Logic Analyzers, Power Supplies, Digital Multimeters
- Hardware & Protocols: ARM (bare-metal), ESP32, FPGA, I2C, SPI, UART, USB, CAN
- Engineering Practices: Product Configurations, Systems Engineering, Failure Logging, Test Automation, Continuous Improvement
- Soft Skills: Attention to Detail, Task Management, Analytical Thinking, Organization, Multitasking, Cross-functional Collaboration