EVAN ALEKSEYEV

669-294-5892 evanalexeyev@gmail.com evan-alekseyev @ealekseyev
ealekseyev.github.io/portfolio

Driven Computer Engineering student seeking opportunities in embedded systems, robotics, and edge AI.

Education

San Jose State University — San Jose, CA
Bachelor of Science in Computer Engineering, GPA: 3.6 — *Expected May 2026*

West Valley College — Saratoga, CA
Associate of Arts in Science & Mathematics, Dean's List, GPA: 3.85 — *Graduated May 2023*

Technical Skills

Robotics & Edge AI: PyTorch, TensorFlow, OpenCV, mmWave Sensor Fusion, PID Tuning, Motor/Relay Control
Embedded & Hardware: ESP32, Jetson Orin, Raspberry Pi, TI LaunchPad (MSPM0), FPGA, PCB Design
Languages: C, C++, Python, x86/ARM Assembly, Verilog HDL, Java
Protocols & Architecture: CAN Bus, UDS Diagnostics, Bare-Metal Firmware, Bit-Band GPIO, OS Kernels
Tools: Linux, Git, QEMU, Code Composer Studio, AWS IoT, Vivado, Fusion360

Experience

Mechatronics Engineer — Sep 2025 –
Beagle Technology, Inc — *Dublin, CA*
- Sole owner of embedded firmware (C++): rewrote entire IOBoard codebase to support 4 PCB revisions, 2 machine types, and 12-channel relay control with CAN bus communication to Nvidia Jetson
- Built remote MJPEG streaming service and fleet monitoring dashboard (Python/Streamlit/MongoDB) with GPS tracking, real-time device health, and query optimizations reducing load times by 90%
- Shipped computer vision bug fixes and PID tuning directly to automated machinery operating at customer sites

Web Developer — Jul 2024 – May 2025
BikeBox — *San Jose, CA*
- Designed and developed e-commerce platform for used bicycle parts using LAMP stack
- Deployed full-stack application with DB integration and responsive design
- Saved client over 10% per transaction compared to eBay

Class Projects

Radar Fusion System – TI-Sponsored Senior Project | *Python, AWS IoT, JSON, TI IWR6843AOP* 2026
- Served as scrum master & engineering lead for senior capstone project sponsored by Texas Instruments
- Normalized raw radar track data from IWR6843AOP EVM into standardized JSON packets for AWS transmission
- Architected modular Python system with boot/node identity management and millisecond-precision timestamps for synchronized cloud logging

Notable Projects

E90 Remote Start – BMW CAN Bus Controller | *C++, ESP32, CAN Bus, WiFi/HTTP* 2025
- ESP32-based CAN bus controller interfacing with BMW E90 K-CAN network for real-time telemetry and control
- Reverse engineered 20+ CAN IDs covering engine RPM, throttle, climate, central locking, and remote start
- Designed custom hardware to interface with vehicle start/stop system for remote start functionality

Add Spice - 3D CNN Video Analysis | *Python, PyTorch, OpenCV, 3D CNNs* 2025
- Built AI system rating biking intensity 0–10 from GoPro clips
- Processed grayscale clips with 3D CNNs at 16 FPS
- Deployed locally for real-time evaluation on RTX 3050

AI-Powered Indoor Localization | *Python, TensorFlow, ESP32, C++* 2024
- Configured an ESP32 to perform Wi-Fi triangulation by measuring signal strengths from nearby routers
- Trained TensorFlow model for indoor location prediction
- Implemented real-time IoT data collection pipeline: ESP32 → Computer → Tensorflow → GUI