Edward Silva

Linkedin.com/in/edwardasilva | easilva.com | contact@easilva.com | (702) 720-7735

Education

Colorado School of Mines, **GPA:** 3.44 Expected May 2026
BS in Electrical Engineering – Controls & Signal Processing
Minor in Computer Science – Software and Algorithm Design
Courses: Information Systems Science I, Embedded Systems, Modern Control Design, Software Engineering
Certifications: Microsoft Technical Associate - Java & Python Programming

Skills

Programming Languages: C++, Python, MATLAB, Java, Verilog, RISC-V Assembly, Bash
Hardware: Arduino, Raspberry Pi, Digital Circuits, Embedded Systems, Microcontrollers, Circuit Design
Software: VS Code, Git/GitHub, Linux, Virtualization, Autodesk Revit, MEP AutoCAD, SSH, LaTeX

Experience

Software Engineering Intern, Kratos Defense – Colorado Springs, CO June – August 2025

- Achieved 1.6x execution speedup by optimizing legacy DSP algorithms in C++ through code refactoring and performance analysis, reducing computational overhead for real-time signal processing applications.
- Improved system throughput by developing and implementing SIMD-optimized mathematical algorithms using vectorized operations for parallel data processing.
- Researched and demonstrated an improved approach to coding a FIR filter, presenting positive findings and performance gains to the team for adoption in future projects.
- Reduced debugging time and improved system maintainability for development teams by designing and deploying a comprehensive logging framework with configurable severity levels and error tracking.

Co-op Intern, Electrical Design, Jordan and Skala Engineers – Denver, CO January – June 2025

- Contributed to electrical design of 20+ multi-unit residential and specialty building developments, spanning initial takeoffs, layout design, riser diagrams, NEC verification, and QC review.
- Developed proficiency in Autodesk Revit and MEP AutoCAD, strategically placing electrical receptacles, lighting, and circuits to ensure NEC compliance and practical, user-centered functionality.
- Performed circuit loading and voltage drop calculations, balancing panel schedules and selecting appropriate breakers to ensure safety, reliability, and adherence to regulatory standards.
- Utilized existing automation between Revit/CAD layouts and Excel tracking sheets to streamline design documentation processes and reduce manual errors.

Projects

Autonomous Path Following Robot, Arduino, Raspberry Pi, Python, C++ August 2025 - Present

- Developing the computer vision system for a semester-long robotics project, working within a four-person team split between vision and controls
- Created a real time object detection program in Python using OpenCV that identifies target shapes from live video streams with bounding boxes and masks, surpassing the original single image requirement
- Building a communication interface between the Raspberry Pi and Arduino to exchange control and sensor data, enabling integration of perception with motion control
- Supporting integration with a PID control system to achieve accurate path following and autonomous navigation

Extracurriculars

Astronomy Club, IEEE, ACM, Hiking