Edward Silva

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Experience

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

- Optimized legacy DSP algorithms in C++ through code refactoring and performance analysis, achieving 1.6x execution speedup and reducing computational overhead for real-time signal processing applications.
- Developed and implemented SIMD-optimized mathematical algorithms using vectorized operations, enabling parallel data processing and improving system throughput for multi-channel signal analysis.
- Designed and deployed a comprehensive logging framework with configurable severity levels and error tracking, reducing debugging time and improving system maintainability for development teams.
- Contributed to agile development practices using Jira for sprint planning, task tracking, and project management, enhancing team collaboration and delivery efficiency.

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.
- Collaborated closely with supervisors and cross-disciplinary teams (Mechanical, Plumbing), documenting client interactions and team meetings to improve project coordination and team efficiency.

Undergraduate Researcher, ePower Hubs Research Lab – Golden, CO June – December 2024

- Independently conducted literature reviews on sensor systems and wind farm-level control strategies, focusing on offshore integration with variable voltage, power, and frequency constraints.
- Synthesized findings into multiple internal reports using LaTeX, contributing to cost-reduction strategies in wind farm grid maintenance, design, and power grid integration.
- Provided insights that influenced the direction of ongoing research led by a faculty advisor, shaping the lab's approach to offshore wind system modeling.

Education

Colorado School of Mines, **GPA:** 3.44 Expected May 2026
BS, Electrical Engineering – Controls & Signal Processing
Minor, Computer Science – Algorithm Design
Courses: Advanced Control Systems, Signals & Systems, Embedded Systems, Software Engineering
Certifications: Microsoft Technical Associate (MTA): Python & Java Programming

Skills

Programming Languages: C++, MATLAB, Java, Python, Verilog, C#, RISC-V Assembly, Bash, JavaScript
Technology: SSH, Linux OS (Ubuntu), Raspberry Pi, Arduino
Software: Autodesk Revit, MEP AutoCAD, VS Code, GitHub