

Edward A. Silva

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

Education

BS, Electrical Engineering – Colorado School of Mines – **GPA: 3.435** December 2026

Computer Science Minor, Software and Algorithm Design

Honors: Dean's List, Honor Roll, Provost Scholarship, C-MAPP Scholar, American Bureau of Shipping Scholar

Courses: Control Systems, Electric Machines, Electromagnetics, Embedded Systems, Software Engineering

Experience

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

- Supported electrical design for approximately 10 multi-unit residential developments, taking responsibility for full-cycle project activities from initial takeoffs and unit/corridor layout creation to riser diagrams, NEC code verification, and final quality control.
- 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 2024 – January 2025

- 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.

Projects

EEPrep.com, HTML, CSS, Javascript December 2024 – Present

- Conceptualized and developed a comprehensive, open-source educational platform tailored for electrical engineering students and aspirants.
- Designed and implemented a client-side architecture using HTML, CSS, and JavaScript to ensure accessibility and responsiveness across devices.
- Authored and continuously expanded original content, including detailed explanations, tutorials, and practical examples, to facilitate in-depth learning.
- Established a GitHub repository to encourage community contributions, fostering collaborative development and content enhancement.

Solar Panel Optimization Robot, Python, Arduino, Github August – October 2024

- Designed and built a dual-axis solar tracking prototype using Arduino-controlled servos and photoresistor-based voltage divider circuits to maximize solar exposure.
- Wrote a custom tracking algorithm from scratch to identify the brightest point in the sky through light intensity sampling, enabling precise pitch and yaw adjustments.
- Utilized a Raspberry Pi as the system's central controller, handling logic flow and interfacing with the Arduino to execute real-time motor positioning.

Skills

Programming Languages: Java, Python, Verilog, C, C++, C#, RISC-V Assembly, Bash, MATLAB, JavaScript

Technology: SSH, Linux OS (Ubuntu), Raspberry Pi, Arduino

Software: Autodesk Revit, MEP AutoCAD, VS Code, GitHub