Edward A. Silva

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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

- Designed electrical layouts in Revit for multi-unit residential developments, applying NEC standards to optimize receptacle and lighting placement for functionality and code compliance.
- Analyzed circuit loading and performed voltage drop assessments on branch circuits, ensuring calculations met code requirements and improved reliability.
- Managed panel scheduling and circuiting for residential and commercial projects, balancing loads across 120V and 208V systems while maintaining NEC compliance.
- Developed automation between CAD/Revit electrical layouts and Excel tracking sheets, streamlining unit tracking processes and reducing manual entry errors.
- Reviewed one-line and riser diagrams to verify transformer sizing, grounding strategy, and load distribution, ensuring compliance with NEC standards.

Undergraduate Researcher, ePower Hubs Research Lab – Golden, CO June 2024 – January 2025

- Conducted literature review on sensor systems and wind farm level controllers, analysis of offshore wind energy systems, focusing on variable voltage, power, and frequency integration with the existing power grid.
- Aimed to reduce maintenance, design, and integration costs of complex wind farm grids.

Coding Instructor, Code Ninjas – Fairfax, VA March – August 2022, May – August 2023

- Taught 50+ students JavaScript and C#, leading STEM camps for 100+ students on 3D modeling, robotics, web development (HTML, CSS, JS), and C# development.
- Deployed and managed a 3D printing server via OctoPi, optimizing operations for 3 printers.
- Recognized as Instructor of the Month (June 2022 & July 2023) for exemplary teaching methods.

Projects

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

- Designing and developing an educational website to provide resources and study materials for aspiring engineers preparing for an Electrical Engineering Degree.
- Implementing interactive features using HTML, CSS, and JavaScript to enhance user experience.
- Structuring content into organized chapters and topics, covering key concepts in electrical engineering such as control systems, electromagnetics, and power systems.

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

- Designed and programmed a controller for optimal solar panel alignment using Arduino microcontroller, light sensors, and motor controllers.
- Developed a prototype for pitch and yaw adjustments, enhancing solar panel energy capture through advanced tracking algorithms.
- Conducted testing and calibration under varying atmospheric conditions to ensure optimal performance.

Skills

Programming Languages: Java, Python, Verilog, C, C++, C#, RISC-V Assembly, Bash, MATLAB, VBA
Technology: SolidWorks, Virtualization software, VS Code, SSH, Linux OS (Ubuntu), Raspberry Pi, Arduino