Edward A. Silva

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Education

BS, Electrical Engineering – Colorado School of Mines – **GPA:** 3.435 May 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
- Assisting in electrical design projects using Revit.
- Learning and applying ordinance codes in design work to ensure compliance with local regulations.
- Collaborating with the engineering team to develop efficient and innovative electrical systems for commercial and residential projects.

Undergraduate Researcher, ePower Hubs Research Lab – Golden, CO June 2024 – Present
- Developed a neural network model to predict sensor system failure in wind turbines, reducing system downtime.
- Researched offshore and onshore wind energy systems, focusing on integrating variable voltage, power, and frequency with the power grid.
- Aimed to reduce maintenance and integration costs for wind farm grid systems.

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 2023 – Present
- Designing and developing an educational website to provide resources and study materials for aspiring engineers preparing for the FE Electrical exam.
- 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.
- Ensuring responsive design and accessibility across devices using modern web development tools.
- Integrating analytics to track user behavior and optimize content delivery for a better learning experience.

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.

Hydraulic Ram Pump, Engineering Design Cornerstone August – December 2022
- Recognized as Subject Matter Expert (Top 4 of 40 teams) for presenting an innovative, cost-effective design for managing acid mine drainage.
- Built a prototype for under $100 using PVC piping and a pH filtration system, reducing environmental impact at legacy mining sites.

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