Aaron Schurman

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Portfolio of Engineering Projects: https://aaronschurman.github.io/AaronSchurman/

I am driven to create impactful solutions by merging hardware and software. With a strong background in control systems and industrial automation, I aim to develop tools that empower innovation and conserve time. I excel in collaborative environments where ideas and feedback are exchanged frequently, enabling continuous improvement and teamwork.

Technical Skills

Embedded Systems | Control Systems | Industrial Automation | AutoCAD | Python | C++ | C | HTML | Data Visualization | LED Systems | G-Code | Modbus | LTSpice | SolidWorks | P&ID | Adobe InDesign | Jupyter Notebook

Experience

Control Systems Engineer - Intern May 2024 - Present

Water Remediation Technology - Westminster,

WRT offers the simplest, safest, most cost-effective and environmentally sound processes available for removing radium, uranium and other contaminants from water.

- Designed Piping and Instrumentation Diagrams (P&IDs) in AutoCAD, adhering to Scope of Supply , customer requirements, and EPA regulations
- Established and standardized over 100 P&ID protocols across the company for Radium, Uranium, and Heavy Metal filtration systems.
- Installed and programmed Variable Frequency Drive (VFD) controllers for motors in the media production plant, optimizing operational efficiency.

Electrical Engineer - Intern Apr - Sep 2021 | May - Aug 2022 | May - Aug 2023

Newforge Technologies - Newtown, PA

Innovative solutions to engineering challenges in medical devices, compound semiconductors, vacuum technology, and space-based solar power

- Constructed an ultra-high vacuum system for testing and processing solar cells that flew on the successful NASA DART mission to redirect asteroid Dimorphos
- Wired and assembled a high power, large area LED-based UV Light Source for pre-conditioning the DART solar cells
- Employed Python and C++ for data visualization, leveraging tools such as Matplotlib, Pandas, and Numpy.
- Software lead, designing embedded control systems on microcontrollers utilizing GRBL, Modbus, and RS485 configuring the light uniformity to within 5% between cells meeting the requirements for a large-area LED-based UV light source.
- Innovated a method for extracting coffee beans from a novel illumination roasting device.

Editor in Chief Jan 2022 - Present

The Colorado Engineer - CU Boulder, CO

Established in 1904, Colorado Engineer Magazine is the oldest student publication at the University of Colorado Boulder.

- Oversaw all stages of content creation, from ideation and writing to editing and publication, ensuring adherence to strict deadlines and high editorial standards
- Collaborated with industry experts and engineers to produce in-depth feature articles, interviews, and technical reviews, enhancing the magazine's reputation as a trusted source of information
- Managed a diverse team of writers, editors, and designers, providing guidance and feedback to maintain consistency and quality across all publications
- Actively recruited college students by presenting at university classes and events, effectively pitching the magazine and its opportunities, resulting in a 40% increase in student contributors

Research Assistant Mar - Dec 2022

(COSINC) Colorado Nanofabrication and Characterization Lab - CU Boulder, CO

A multidisciplinary core research facility and service center.

- Assisted in the assembly of a large scanning electron microscope (SEM)
- Responsible for managing the flow of gas in lab space to SEM's
- Actively manage resources in lab space to ensure smooth user operation

Education

B.S. Electrical and Computer Engineering **GPA 3.74**

University of Colorado at Boulder | Graduating May 2025

Patents and Awards

Illumination Roasting - Co-Inventor **PatentNumber** US-20240065308-A1

Eagle Scout - Troop 99 | Awarded CU Boulder Presidential Scholarship