Hayden Fuller

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OBJECTIVE: Obtain a summer 2024 internship related to electrical and computer & systems engineering.

EDUCATION:

- **Rensselaer Polytechnic Institute, Troy, NY   GPA: 3.33**   May 2025
  Bachelor of Engineering in Computer and Systems Engineering
  Bachelor of Engineering in Electrical Engineering
  Minor in Economics of Technology and Innovation

EXPERIENCE:

- **Computer Systems Engineer, Solar Data Acquisition and Chip Design, Rewire, internship** Fall 2023
  Consulted upper management on ASIC design, learned/improved web dev skills, researched and reported on use of LMM AI for HVAC control and for consulting through RAS.
- **RPI Design Lab Internship - LESA LED lighting**   Summer 2023
  Completed an unfinished Capstone, among other tasks. Designd, tested, and fabricated an LED housing for use in a plant growth chamber to protect LEDs from harsh heat and humidity while maintaining serviceability.
- **App. Specific Integrated Circuit Testing & Documentation**, Topics in IC Design & Testing Fall 2022-Present
  2 part ongoing Independent Study. Used Verilog to design and simulate an ASIC chip in a team of 6, working along side several local companies, including Efabless, NY Design, Lithoz, and GlobalFoundries. Test and document the functionality of the ASIC we designed, implement it into a custom PCB and housing for real world use, and document the process for future groups to add to and improve upon our work.

PROJECTS:

- **Custom built keycard access:** Wiegand reader protocol, Arduino, C programming, 3D modeling   2022-present
  Soldering, Breadboard wiring, multiple additions on the way including discord bot connection
- **LED matrix for ASIC:** a mock up circuit of what would be connected to our ASIC for the above ind. study 2022
- **Handyman at home:** Installing and fixing devices, rewiring things that electricians installed incorrectly, etc.
- **Stereo active+passive audio mixer:** Circuit design, part selection, soldering, CAD, OpAmps, BJTs 2023-present

SKILLS:

- Electronics, Programming, Mechanical Design, Fabrication, Troubleshooting, Testing, Analytics
- Analog and digital circuit design and analysis, C++, Embedded Control Systems, Arduino, LTspice, Python, C, Prototyping and Testing, Linux/WSL (Ubuntu), LaTeX, Siemens NX, MATLAB, Verilog, VHDL, spreadsheets
- Troubleshooting, Learning, Analytical thinking, Problem solving, Leadership, Teamwork, Communication
- Benchtop osciliscopes, function gens, power supplies, multimeters, etc

HOBBIES:

- Mechanical keyboards: soldering, C programming, hardware and software debugging, github
- 3D printing and modeling: NX, learning fusion360, mechanical design and troubleshooting
- Hockey, Counter Strike: Communication, teamwork, risk and cost benefit analysis, planning, resilience

LEADERSHIP:

- RPI Embedded Hardware Club, Operations Officer   January 2022 - Present
  Event planning, teaching ECSE skills, hosting open shop hours, managing discord server, sending announcements
- Eagle Scout, Louisville Troop 30   February 2021
- Various Senior Leadership Position, Louisville Troop 30   February 2018 - February 2020
      Senior Patrol Leader   Aug 19-Feb 20   National Youth Leadership Training   Jun 17

RELATED COURSES:

- Fields & Waves: electromagnetics and it's effects
- Intro Electronics: NonLinear Circuit design & construction
- Microelectronics: Semiconductor principles & manufacturing
- Intro Engineering Design: Design from problem to product
- Engr. Processes: Hands on machining experience (for fun)
- Electrical Energy Systems: Power Systems, Renewable Energy
- Signals and Systems: linear systems, filtering, processing
- Electric Circuits: Linear Circuit design and construction
- Intro to Algorithms: Analyzed pros and cons of algorithms
- Data Structures: C++, create and use fund. data structures
- Cptr. Components and Ops: transistors to RAM and FSMs
- Embedded Control: C, PID, I2C, subsystem integration, debugging
- Engr Graphics & CAD: 3D models from drawings & vise versa.