

Emma Wojnarowski

(860) 999-3550 • Manchester, CT 06042 • wojnae@rpi.edu

OBJECTIVE

Looking for an internship to challenge me and increase my experience in different electrical engineering sub-disciplines.

EDUCATION

Rensselaer Polytechnic Institute | Troy, NY
Major: Electrical Engineering | GPA: 3.15

Expected Graduation: May 2026

PROJECTS & EXPERIENCE

Microprocessors in Embedded Engineering Systems

August 2023 - December 2023

Embedded Control | Troy, New York

Designed and interfaced hardware and software to sense, display, command, and control simple engineering processes. Wrote software for a real-time embedded control system. Prototyped, implemented, and debugged the hardware for an embedded control system, with a strong emphasis on troubleshooting. Used a USB multifunctional instrument, such as the ADALM1000, and the hardware provided within the laboratory, such as the TI-RSLK Robotic Car which has an MSP-EXP432P401R installed upon it. Some labs included designing a game similar to wordle using the robotic car's bumpers, resistors, and LEDs, and using a potentiometer to determine voltages to calculate distances for a shape's radius and length so that the robotic car can follow a track in the classroom.

Battery Charging Integrated Circuit

August 2023 - Present

Rensselaer Motorsport (Formula SAE) | Troy, New York

Researching and designing methods on how to integrate the electric vehicle's specific charger (Elcon 6.6kW CAN bus Charger) with its battery which is used to run 400V. Learning how to safely and effectively charge our electric vehicle which will be raced at competition in June 2024.

Fourier Analysis & Fourier Synthesis

March 2023

Intro to Electric and Computer Systems Engineering | Troy, New York

Proved the concept of Fourier Analysis by determining which two basic types of signals (and their frequencies) were summed to create a mystery signal provided for the lab and the concept of Fourier Synthesis by reconstructing the mystery signal in the time domain. Used Simulink to create models for the graphs of the signal.

HONORS & EXTRACURRICULARS

National Society of Leadership and Success

September 2023 - Present

Rensselaer Women's Swimming & Diving Team

September 2022 - Present

Student Athlete Advisory Committee

February 2023 - Present

Rensselaer Motorsport (Formula SAE)

August 2023 - Present

Embedded Hardware Club

September 2023 - Present

RELEVANT COURSES

Electric Circuits | Embedded Control | Computer Components and Operations | Computer Science I | Differential Equations | Physics II | Intro to Electrical and Computer Systems Engineering | Engineering Communications | Engineering Probability

SKILLS

Computer & Electrical Applications

CAD Siemens NX | LabVIEW | MATLAB | C++ | C | Python | Debugging | LTSpice | Electronics & Circuits | Microcontrollers | Diodes | Filters | Nodal Analysis | Microsoft Office | Research & Design | Technical Writing | M1K & ADALM1000 Alice Software

Communications & Leadership

Presentation Composition | Communications Technology | Successfully held and led meetings for group projects | Quick learner | Disciplined | Public speaking

VOLUNTEER WORK

Volunteer

April 2023

Special Olympics

Volunteered during the Special Olympics Basketball Tournament held at RPI. Helped to set up and run the stations, and cheered for the teams.