Samuel Rosen

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About Me

Mechanical engineering student seeking a summer 2026 internship. Experienced in systems design. Passionate about robotics, mechatronics, aerospace, and vehicles. Motivated to gain industry experience and contribute to meaningful engineering projects.

Education

University of New Haven — West Haven, Connecticut

Bachelor of Science, Mechanical Engineering — **Graduation Date: May 2027**

GPA: 3.2

Skills

- Computer Aided Design (SolidWorks, Fusion 360, Autodesk AutoCAD, Plant 3D, OnShape)
- FDM and SLA 3D printing, Laser Cutting, Rapid Prototyping, Power Tools, Hand Tools
- Design for Manufacturing (DFM), Design for Assembly (DFA), and GD&T
- Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), ANSYS, COMSOL Multiphysics, Multisim, LabVIEW
- Microcontrollers and Single-board Computers (ESP32, Raspberry Pi, Arduino)
- Electronics Prototyping, Circuit Assembly, Soldering, Motor Control, Sensor Integration, Actuators, PID Control
- Python, C/C++, Linux, ROS2, VS Code, GitHub

Leadership and Involvement

Mars Rover Team Leader — August 2025 – Present

- Helping team members and coordinating work for a team of about 10 students across mechanical, electrical, and software engineering sub teams.
- Managing budget and purchases with the Undergraduate Student Government Association.
- Designing, integrating, and testing an automated electro-mechanical science subsystem for the 2026 University Rover Challenge (URC). Includes mechanical design, DFM/DFA, actuators, motor controllers, encoders, sensors, and power distribution, with Python control on a Raspberry Pi running Ubuntu Linux to support automated soil collection, sample handling, and life detection assays targeting metabolic activity, amino acids, and proteins.

New Haven Aerospace Club — October 2024 – Present

- Designed and manufactured a 3D printed remote controlled airplane.
- Learn valuable teamwork skills by working with peers on large projects.

Work Experience

Energy Engineering Intern | BL Companies, Melville, New York — June 2025– August 2025

- Designed a vaulted regulator station using the Plant 3D catalog and specification sheet that I created.
- Created Bill of Materials (BOMs) and Standard Operating Procedures (SOPs).
- Developed the standards for using AutoCAD Plant 3D.
- Created AutoCAD Plant 3D parts catalog and specification sheets.
- Utilized AutoCAD to design 2D drawing sets for gas transmission line layouts, distribution line layouts, and regulator stations.

Installation Technician | Audio Breakthroughs, Manhasset, New York — May 2024 – August 2024

- Installed and programmed state-of-the-art audio and visual equipment as well as smart home devices including Lutron HomeWorks, Savant, Ring, Control4 and Crestron.
- Installed and set up Wi-Fi networks using ethernet, ethernet switches, and network devices.
- Performed repairs and troubleshooting on audio receivers, amplifiers, pre-amplifiers, and smart home equipment.

Relevant Project

Automatic Pill Dispenser (Pill Pal) https://www.youtube.com/watch?v=gSdmQESV2fc&t=1s

- Designed and manufactured all 3D printed parts.
- Soldered all electrical components onto PCB prototype.
- Wrote code to host access point with web page for medicine schedule and additional information.

Awards

Nominated for the Bucknall Family Undergraduate Research Award by Biomedical Professor Dr. Amoako

Project - *Liposome Production for Vaccines Using 3D Printed Microfluidics*