

Eli Branstetter

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Education

University of Cincinnati, College of Engineering and Applied Science	4.00 GPA
Master of Engineering in Robotics and Intelligent Autonomous Systems	Dec 2025
Bachelor of Science in Mechanical Engineering	May 2025

Work Experience

Automation Engineering Co-op, Marmon Holdings - Corporate Automation Team May–Aug 2024

- Led investigation to integrate part marking into manufacturing process to fulfill customer needs and gain market advantage requiring samples and quotes from 7 vendors and creation of project bid specification
- Researched, tested, and selected reverse engineering software to improve quality and automation opportunities

Modsort Automation Engineering Co-op, Regal Rexnord Aug–Dec 2023

- Designed and fabricated test stand to develop department knowledge of MDR motor life in simulated conditions
- Programmed testing and data analysis scripts in Studio 5000 Ladder Logic and VBA to reduce test time by 40%
- Researched and presented key patents to team to promote market analysis and innovation efforts

Modsort Automation Engineering Co-op, Regal Rexnord Jan–April 2023

- Designed and ordered sheet metal parts for new conveyor attachments
- Performed and presented testing of Flexco Transfer Strips compatibility with the Modsort catalog
- Constructed sample conveyor line controlled with ERC cards programmed in Ladder Logic for testing

Mechanical Engineering Co-op, MiQ Partners May–Aug 2022

- Designed and detailed an improved automated label printing station, involved onsite measurements, creation of 11 custom components, and production of manufacturing and assembly drawing package
- Improved acceptance rate of three Covid Test Kit robotic assembly machines, totaling 28 stations, from 97% to 99.9%, and run time percentage, 32% to 98%, using root cause analysis
- Collaborated with customer to complete Factory Acceptance Testing and created operation guild for factory use

Projects and Involvement

Senior Capstone, Team Lead, Low Water Usage Targeted Silicone Wafer Cleaning Aug 2024–Present

- Led team in the creation of a 2 axis gimble to detect contaminants and remove them with controlled droplets
- Programmed vision system to locate particles and droplets using OpenCV and contributed to PID control system

Theta Tau, Co-ed Professional Engineering Fraternity, Iota Gamma Chapter Jan 2024–Present

- Led events for members to improve their professional skills and prepare for their job searches

Vice President of Membership, Tau Beta Pi, Engineering Honor Society Aug 24–Present

- Reported and contacted eligible students, maintained organization records, and aided chapter operations

Gikingo Committee Chair, Engineers Without Borders–USA University of Cincinnati Chapter Jan 2023–Dec 2024

- Managed 20-member committee to select and start the chapter's new water development and distribution project in Rwanda, projected to span 3-5 years with a budget exceeding \$25,000
- Planned international trip to collect data, meet stakeholders, and coordinate partnership agreements

College of Engineering and Applied Science Tribunal Innovation Challenge May 2023–Jan 2024

- Designed and fabricated 2 axis turret to aim ultrasonic speaker and create a beam of sound for personal audio
- Presented business pitch and prototype and won 2nd place among 20 teams, for entrepreneurial opportunity

FIRST Tech Challenge, FIRST Robotics Sept 2018–Feb 2021

- Designed custom 3D printed parts in Fusion 360 to enhance robot's function and won mechanical design awards
- Programmed robot to navigate the competition area and complete game objectives utilizing Android Studios

Eagle Scout Project, Scouting America Aug 2018–July 2019

- Led a team of 30 volunteers, collectively contributing 270 hours of service, to construct an 18ft tall chimney swift tower to provide a safe nesting habitat for the birds

Skills

SOLIDWORKS | Fusion 360 | Siemens NX | PTC Creo | AutoCAD | CAD | 3D Printing | Rapid Prototyping | Robotics Test Design | Data Analysis | VBA Macro Programming | Python | LabVIEW | MATLAB | Ladder Logic | PLC | Computer Vision | Open CV | Factory Talk HMI Design | Electrical Design | Technical Writing | Project Management | MS Office |