Eli Branstetter

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Education

University of Cincinnati, College of Engineering and Applied Science
Master of Engineering in Robotics and Intelligent Autonomous Systems — 3.83 GPA | Dec 2025
Bachelor of Science in Mechanical Engineering — 4.00 GPA | May 2025

Work Experience

Development Engineering Co-op, Prism Plastics |a Marmon Company, Meadville, PA — May 2025–Present
- Designed, purchased, and implemented cell upgrade to reduce reject rate and operator labor, saving $25k/year
- Created tool to estimate automation costs for quoting team, reducing quote time from 4-20 hours to 15 minutes
- Managed automation integrators for $400,000 packaging line refurbishment with line capability improvements

Automation Engineering Intern, Marmon Holdings, Chicago, IL — 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, Cincinnati, OH — 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, Cincinnati, OH — 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

Mechanical Engineering Co-op, MiQ Partners, Cincinnati, OH — 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 guide for factory use

Projects and Involvement

Senior Capstone, Team Lead, Low Water Usage Targeted Silicon Wafer Cleaning — Aug 2024–April 2025
- Led team to create a 2-axis gimbal to clean silicon wafers with controlled droplets to win 1st of 50 teams at Expo
- Programmed computer vision to locate particles and droplets with OpenCV and contributed to PID control

Theta Tau, Co-ed Professional Engineering Fraternity, Iota Gamma Chapter — Jan 2024–April 2025
- 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 2024–April 2025

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 to win 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 30 volunteers, for 270 hours of service, to construct a chimney swift tower providing habitat to 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 | OpenCV | Factory Talk HMI Design | Electrical Design | Technical Writing | Project Management | MS Office |