

KYLE FITZGERALD

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EDUCATION

Northeastern University, College of Engineering – Boston, MA Aug 2024
Master of Science, Product Development
Honors: Deans list | **GPA:** 4.0

Northeastern University, College of Engineering – Boston, MA May 2024
Bachelor of Science, Mechanical Engineering with minor in Entrepreneurial Engineering
Honors: Cum Laude, Northeastern University Honors Program, Dean's List, Northeastern Sailing Team

Clarkson School at Clarkson University – Potsdam, NY May 2019
Program for advanced students to complete senior year of high school and first year of college simultaneously
Honors & Activities: Clarkson University Honors Program, Dean's List, Formula SAE, Outing club

TECHNICAL EXPERIENCE

QinetiQ North America – Waltham, MA Jan 2023 – Aug 2023
Mechanical Engineer Coop, Robotic Land Systems

- Designed PTZ camera pivoting mast for TALON VI, a next-gen military EOD robot. The 41-part assembly consisted of CNC milled and lathed parts, sheet metal, press and slip fits, and weldments, all compliant with DFM and Mil-Spec req
- Assisted with the mechanical design of sensor pods for Robotic Combat Vehicle–Light (RCV-L) which allowed for autonomous vehicle operation.
- Machined and fabricated various prototype assemblies for TALON VI and RCV-L using mill, lathe, and power tools
- Studied and prototyped various methods for mission-critical LiDAR and camera cleaning on RCV-L with limited fluid
- Maintained fleet of 3D printers and constructed fully custom 3D printer from scratch to meet rapid prototyping needs

Tulip Interfaces – Somerville, MA Jan 2022 - Aug 2022
Mechanical Application Engineer Coop, Tulip Experience Center

- Built out and implemented new 1000 sqft Tulip Experience Center (TEC) with \$80,000 to \$100,000 budget.
- Designed and built custom extruded aluminum benches, reverse engineered and constructed spindle assembly line from DMG Mori, and assisted in design of 15 lean manufacturing demo stations
- Designed an app and debug screens to check function of all 15 unique demos with over 100 sensors connected to Tulip
- Created a wireless charger manufacturing line comprised of 4 workstations in one week for FormLabs Digital Factory
- Designed and built a fleet of 8 tradeshow benches showcasing Tulip's core functionality to over 125,000 people
- Constructed 850 sqft tradeshow operational area for maintaining, updating, and troubleshooting tradeshow fleet

Sidco Filter – Manchester, NY Jan 2021 - Aug 2021
Process Improvement Engineer Coop

- Using 5S principles, evaluated, designed, and implemented process improvements and new fixtures to gasketing cell thereby improving cell layout, increasing output by 15%, while decreasing redundancy and repetitive injury exposure
- Reverse-engineered \$1k filter for production by replacing injection molded cap with 3D printed ABS endcap for a total part cost of \$100, pioneering the use of 3D printed endcaps at the company
- Fabricated and assembled products, while interpreting schematics for product specifications

RESEARCH EXPERIENCE

Terascale All-Sensing Research Studio – Clarkson University Aug 2018 – May 2019

- Coordinated and led 9 research assistants in determining specifications and initial design of chassis, drive train, and linear elevator in Fusion 360 for a fully autonomous walker for the elderly

Laboratory for Intelligent Automation – Clarkson University June 2018 - July 2018

- Prototyped and invented a completely FDM 3D printed micro internal-tooth, quad internal-pawl ratchet for reduced size and greater strength using Fusion 360 as part of a posable prosthetic thumb for a pediatric amputee

SKILLS & INTRESTS

Software: Creo, SolidWorks, Fusion 360, Windchill, ANSYS, AutoCAD, MATLAB, Arduino, Jira

Technical: Six Sigma Greenbelt Program, Finite Element Analysis, GD&T, Design for Manufacturing, Tolerance Analysis, Technical Writing, Sheet Metal Design

Equipment: Shop Hand & Power Tools, FDM & SLA 3D Printing, Soldering, Manual Mill & Lathe, Laser Cutting

Interests: Skiing, Sailing (Racing), Mountain Biking, Working on Personal Projects in Workshop