

MORGAN FOSTER

foster.mo@northeastern.edu | (516) 423-4294 | morganemilyfoster.com

EDUCATION

Northeastern University, Boston, MA

May 2021

Bachelor of Science in Mechanical Engineering, Minor in Materials Science and Engineering

GPA: 3.77

Honors: University Scholar (Full Tuition Merit Scholarship), University Honors Program Distinction, Engineering Legacy Scholarship, Dean's List, Magna Cum Laude

Extracurricular Activities: Civic Engagement Program, Society of Women Engineers, Generate Product Development

SKILLS

Applications: SolidWorks, Fusion 360, Onshape, AutoCAD, ANSYS, Arduino, Microsoft Word, PowerPoint, and Excel VBA

Programming: C++, MATLAB & Simulink, LabVIEW

3D Printing: HP Jet Fusion 540, Formlabs Form 3, Creality CR-10S, Prusa i3 MK3S

Machine Shop: Manual knee mill, lathe, band and table saws, drill press, general tools, etc.

WORK EXPERIENCE

KEA Technologies, Littleton, MA | *Mechanical Engineer*

Jul. 2021-Present

- Develop assemblies for in-vehicle implementation, from ideation to production, considering design for manufacturing and design for assembly principles and coordinate with contract manufacturers
- Design hardware for breath and touch-based alcohol-detection systems using 3D scanning and surface modeling techniques
- Operation and maintenance of internal prototyping farm including creating builds and inventory upkeep
- KEA/Northeastern Co-op Program Liaison and member of KEA's Diversity, Equity, and Inclusion Committee

Novartis Institutes for BioMedical Research, Cambridge, MA | *Automation Engineer Co-op*

Jul. 2020-Dec. 2020

- Developed scripts to program the movement of robotic arms central to and integrated devices onto automated systems performing high-throughput screening to help with the drug discovery process
- Constructed a Tecan robotic liquid handling system to autonomously dissolve compound powders into solution for use within Compound Management group
- Repaired, troubleshot, and maintained library of robotic systems and research laboratory equipment from Agilent, Sartorius, Thermo Fisher, etc.

Desktop Metal, Burlington, MA | *Mechanical Engineer R&D Co-op*

Jul. 2019-Feb. 2020

- Designed and built functional prototypes dealing with metal powder containment and transport such as vacuum and belt systems for Production line printers which mass produce 3D metal parts
- Installed custom hardware to monitor the printing process including fixtures for sensors, cameras, and lighting
- Implemented tests and designed test rigs for validating sensor functionality in experimental applications

University of Cagliari, Cagliari, Italy | *Solar Energy Research Co-op*

Jul. 2018-Dec. 2018

PROJECTS

Drop on Demand Printer, Boston, MA

May 2020-May 2021

- Designed a printer to generate droplets of non-Newtonian fluids and fluids with colloidal particles for academic research applications using piezoelectric actuation and FDM 3D printer framework

Goodsticks (Generate), Boston, MA

Spring 2020

- Build Studio Hardware Engineer for student-led product development studio for entrepreneurial engineering
- Designed a manufacturable dispensing mechanism and prototyped food safe dispenser for edible chopsticks