# **Jordyn** Brosemer

### jbrosemer.com

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## **Education**

**TUFTS UNIVERSITY –** Medford MA

**MS:** Electrical Engineering:

Human Robot Interaction

* Cum GPA: 3.42 / 4.00

**LAFAYETTE COLLEGE –** Easton PA **BS**: Electrical Computer Engineering Graduated May 2020

## **Coursework**

*Hardware:*

Power Electronics • Solid State Circuits • Electronic Circuits • Control Systems

*Software:*

Digital Circuits • Embedded Systems • Software Engineering • Digital Signal Processing • Data Structures & Algorithms • Communications • Convex Optimization

*Robotics:*

Advanced Robotics • Probabilistic Robotics

## **Skills**

*Proficient:*

Java • MATLAB • C • Python •HTML/CSS Auto CAD • Inventor • Photoshop

*Familiar:*

SPICE • System Verilog • C++ •

*Tools/Soft Skills/Workflows:*

Git • Project Management • Docker • KiCad

## **Organizations**

2017 – 2020 | **WJRH College Radio Engineer**

2019 – 2020 | **Lafayette College Motorsports**

Present | **IEEE Member**

## **Links**

LinkedIn: @jbrosemer

Github: @jbrosemer

Website: [www.jbrosemer.com](http://www.jbrosemer.com)

## **Experience**

**LOCKHEED MARTIN** | College Student Technical Intern

May 2022 – Dec 2022 | Stratford, CT

* Robotics intern on the blades team integrating machine vision and infrared thermography technologies with UR16e robot to automate helicopter blade inspection.
* UR16 movements programmed with teach pendant, machine vision implemented in Python and MatLab.

**SAE FORMULA HYBRID** | Team Captain

Aug 2019 – May 2020 | Lafayette College, Easton PA

* Nominated and accepted Project Manager role responsible for coordinating development among team of 25 undergraduate Electrical, Mechanical, and Software engineers.
* Ran organizational meetings and tracked project schedule. Self-taught PCB & CAD design while enhancing interpersonal, oratory, time management and technical skills.

**BRANDMUSCLE** | Technology Engineering Intern

* Reported to Lead Enterprise Architect. Containerized over a dozen Windows web applications that were pushed into production environment using C#, Visual Studio, and Docker.

## **Projects**

**BRACHIATING ROBOT** | Python – SolidWorks

* Lead software/hardware designer for final project in Advanced Robotics - a robot that hangs and swings from “branch to branch” of a horizontal ladder. Wrote Python routines that autonomously detect branches and perform autonomous movement by controlling/coordinating robot’s 12 individual motorized joints.

**IR Camera Tracker** | Analog – SPICE simulation

* Tapped into security camera feed and using totally analog hardware to track an IR light. With a current steering network, flip flops and comparators, built a circuit that injected a crosshair into the feed and automatically searching when no IR was present.

**CONVEX ROBOT PATH PLANNING** | MatLab – CVX Package

* Coded program that uses artificial sensor readings to create minimal sized elliptical obstacles. Finds minimum distance between obstacles and creates a path between them using convex techniques

**INGREDIENT DISPENSER** | C/C++ – Autodesk Inventor

* Coded in C++ automated system that dispenses specific amounts/weights of dry/granular/powdered ingredients.
* Developed user interface using UART command window, CAD modeled enclosure and 3D printed dispensing gears.