

# Aidan Altmann

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## Education

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### Northeastern University

Sept 2020 – May 2025

*B.S. in Mechanical Engineering, Minor in Business Administration*

- **Coursework:** Robotics Dynamics and Control, Thermodynamics, Heat transfer, Mechanics, Fluid Dynamics, Computational Design, Financial Accounting
- **Software Proficiencies:** SolidWorks, MATLAB, AutoCAD, C++, Java, Onshape, Fusion360, Maple, Excel
- **Hardware Proficiencies:** SLA Printers, MarkForge Printers, Universal Robots UR-3E robotic arm, Fanuc LR-10iA robotic arm

## Experience

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### Mechanical Engineer/Robotics Test Engineer Intern

Brooklyn, NY

*Electron Robotics*

June 2024 – Sept 2024

- Lead role in designing a robotic work cell for a client project, designing the dimensions of the cell, machining, designing, and ordering parts for the integration of the cell into the factory
- Facilitated all CAD related needs during time employed, including rendering training data models for robotic utilizing cameras and AI recognition software, creating custom fixtures to be machined off-site, and handling tolerancing and reorientation.
- Responsible for designing all mechanical solutions to variety of features and products, such as locking mechanisms, ill-fitting features, among other issues requiring a physical solution.
- Familiarized and tested several types of robotic arms, Universal, Fanuc, and ABB, writing choreography and programs for each arm to carry out similar tasks for comparison.

### Robotics Testing Engineer Co-Op

Needham, MA

*SharkNinja*

July 2023 – Jan 2024

- Ran variety of tests evaluating the performance of prototype builds of robots as well as primary competitors, assisted in utilizing the test data to advance the design process
- Designed protocols and standards used for quantifying both Shark robotics as well as competitor's capabilities in relevant functions such as traversal, cleaning, thoroughness, reliability etc.
- Assisted in creating new features, software changes, and material choices throughout the prototyping stage.

### Mechanical Engineering Intern

Brooklyn, NY

*Physical Synthesis*

July 2022 – Sept 2022

- Worked on several projects contracted by clients, redesigning existing models on SolidWorks, tailored to the client's requests
- Undertook responsibilities of Product Engineer, meeting with clients to go over how to implement design changes, means of manufacturing, as well as integrating new features into the existing build
- Optimized sizing and spacing of electrical components and housing for reducing scale of prototypes

### Mechanical Engineering Co-Op

Boston, MA

*Empatica*

Jan 2022 – June 2022

- Updated and created tolerance stacks for latest models, deducing whether certain designs would create too large of a risk of manufacturing error and helping correct it
- Assisted in CAD design and product testing of prototypes and current products

## Projects

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### Airpods Case Modification

2023-Current

- Replaced stock housing on AirPods Pro with a transparent plastic casing made from 3D-printed photorezin to create a skeleton casing aesthetic to Airpod Pros, displaying the electrical components inside it
- Studied AirPods internal assembly to be able to take apart the components safely to relink them in the new housing
- Tools Used: SolidWorks, DLP printers

### Screech Device Housing

2025

- Designed and modeled in CAD housing for Nonlethal Lab's Screech self defense siren devices for several potential brand partners
- Utilized product design principles to mold housing designs around each potential client's brand aesthetic and values

## Interests

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Film photography, Martial Arts (Boxing, Muay Thai, MMA), Language Proficiency (Proficient in Japanese, Rudimentary understanding of Spanish and French)