

Benjamin Grinberg

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Overview: Junior Aeronautical engineering student with extensive research experience as well as a background in manufacturing, looking for an internship position where I can contribute my skills in design, manufacturing, and testing

Education

Rensselaer Polytechnic Institute, Troy, NY

Expected Dec 2024

BS in Aeronautical Engineering, Junior

GPA: 3.48 - (Dean's List Fall 2020, Fall 2021)

Professional Experience

Research assistant, Center for Flow Physics and Control, Troy, NY

January 2022 - present

- AFOSR (Air Force) funded experiments researching 3D flow separation phenomena in order to minimize drag and optimize flow control
 - Design solutions to problems brought up in experiments and experimental equipment
 - Assisting in the design and conduct of flow visualization experiments
 - CAD modeling of airfoils for wind and water tunnel testing
 - Designed and implemented upgrades to water tunnels
 - Experience with PIV and labview equipment (DAQ, traverses, VI, etc.)
 - Gained knowledge on fluid mechanics and analysis

Projects

- **Manufacturing Processes and Systems I & II:** Designed a product (toy plane) and the tools to produce it with mass manufacture in mind, then made 300 units from raw materials in a team of 12. Used CNC machining, plastic injection molding, die forming, robotic assembly and other tools to complete the 300 units.
 - Used GD&T as well as production tolerances to ensure proper fit and function of the toy plane
 - Tailored product design to constraints of cost and manufacturing time
 - Documented all aspects of design and production as well as procedure for manufacture
- **Rocketry:** I have been developing homemade solid fuel rocket motors made from cheap, easily obtainable materials.
 - Use of simulation tools (METEOR and OpenRocket) to predict thrust curves, ISP, flight time, and aerodynamics
 - Extensive testing to optimize fuel chemistry, fuel grain geometry, and motor casing

Technical Skills

- **CAD and documentation:** Solidworks, Siemens NX, Autodesk software
- **Computation and data collection:** MATLAB, Labview, XFOIL
- **Manufacturing:** CNC, PIM, robotic assembly
- **Microsoft Suite programs**

Extracurricular Activities

- **Member of Lambda Chi Alpha Fraternity, Epsilon Eta:** Executive committee member
 - Plan for the future security and success of the chapter
 - Help officers and members better fulfill their duties
 - Settle internal affairs