Ben Woodman

benwoodman@gatech.edu | (858) 208-7566

Permanent Address:
3805 Torrey Hill Ln.
San Diego, CA 92130

<div align="right">

Campus Address:
955 Spring St NW #2001-B2
Atlanta, GA 30309

</div>

EDUCATION

Georgia Institute of Technology, Atlanta, GA, August 2019 – May 2023 (Expected)   **GPA: 4.00/4.00**

- Bachelor of Science, Mechanical Engineering
- Aerospace Engineering Minor
- Relevant Coursework: Deformable Bodies, Statics, Dynamics, Differential Equations, Engineering Graphics
- Credits Applied: 85 (Including current courses)

EXPERIENCE

Yellow Jacket Space Program, Atlanta, GA – *Propulsion Team Member* (May 2020 – Current)

- Created a Python model that generates an engine geometry and finds its thermodynamic conditions along one dimension based on designed thrust, chamber pressure, and contraction ratio
- Developed a regenerative cooling jacket analyzer in Python that builds a manufacturable cooling jacket geometry that minimizes temperature increase of coolant within wall temperature and manufacturing constraints
- Wrote a material strain calculator to determine cycle life of cooling jacket and pressure loss calculator to determine required coolant inlet pressure
- Integrated an object-oriented approach to better organize code throughout multiple scripts
- Generated CAD models for cooling jacket based on geometries produced in analysis scripts
- Ultimately these will help design a bi-propellant engine capable of sending a student-built rocket into space

Oper Inc, San Diego, CA – *Web Developer* (March 2020 – August 2020)

- Created frontend prototypes for a web application in HTML/JS/CSS that aims to match students to startups interested in outsourcing remote work
- Developed a login system in Node.js & MySQL to manage both student and employer accounts
- Built a user registration form on a remote Ubuntu server with a MySQL database

CCA Foundation, San Diego, CA – *Graphic Design Intern* (June 2019 – August 2019)

- Created a calendar for the following school year in Adobe InDesign
- Used Adobe Illustrator to design posters for fundraising events
- Worked with printing company to properly format files for print

General Motors Car Design Competition, Detroit, MI – *Two-time Winner* (July 2017 & 2018)

- Created multiple concept drawings of a GM vehicle for the year 2030 and presented to industry designers
- Selected as one of three national winners out of hundreds of applicants
- Awarded a three-week camp where I developed a design from ideation to completion
- Advanced skills in rendering objects and made a 1:5 scale clay model of my vehicle

TECHNICAL SKILLS

- Python (experienced) | MATLAB (proficient) | HTML/CSS/JS (proficient)
- SolidWorks (proficient)
- Adobe Photoshop, Illustrator and InDesign (proficient)
- Sketching and rendering complex three-dimensional objects (experienced)

INTERESTS

Space Exploration | Rocket Propulsion Systems | Physics | Microcontroller Programming | Neuroscience | Spikeball