Theo Usher

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EDUCATION

Columbia University, The Fu Foundation School of Engineering and Applied Science **New York, NY**
Bachelor of Science, Mechanical Engineering May 2024
Cumulative GPA: 4.03/4.0
Relevant Courses: Computer Graphics and Design - Solidworks, Intro to Electrical Engineering, Robotics Studio

WORK EXPERIENCE

Terabase Energy, *Mechanical Engineering Intern* May 2022 – Aug 2022
- Designed and assembled a mobile, easy access solar panel storage rack for field deployment of fragile panels
- Collaborated with a team on a vehicle for solar panel transportation and installation

Josh Gottheimer for Congress, *Intern* Jun 2020 – Aug 2020
- Phone banked, researched campaign strategies, voter information, and voting logistics

Manhattan Borough President's Office, *Intern* Jul 2019 – Aug 2019
- Wrote meeting reports, managed surveys, and communicated with the NYPD for district events

Camp Chewonki, *Counselor in Training* Jun 2019 – Jul 2019
- Learned to lead campers at camp and in the wilderness, trained in Wilderness First Aid

LEADERSHIP & COMMUNITY INVOLVEMENT

Columbia Space Initiative - Rockets, *Avionics Team Co-Lead and Recovery Group Lead* Sep 2020 – Present
- Work on a team to research, design, and build a rocket to reach 10,000 ft with a payload
- Lead a 15-person team designing and manufacturing the electronic components of the rocket
- Design and construct the mechanism for the ejection of the rocket nose cone and dual parachute deployment

Engineers Without Borders – Columbia University Chapter, *Treasurer and Piping Team Lead* Sep 2020 – Present
- Work on a team to research, design, source material for, and plan the construction of a water distribution system in rural Morocco
- Manage and allocate $25,000 budget.
- Lead team designing and planning implementation of 4 km of piping and water access points.

ENGINEERING DESIGN PROJECTS

Golem – Bipedal Walking Robot Jan 2022 – May 2022
- Designed bipedal walking robot using Solidworks and sketching
- Manufactured robot with 3D printing, screw inserts, and soldering
- Programmed and tested robot's bipedal walking using Raspberry Pi

Art of Engineering Project Sep 2020 – Dec 2020
- Designed, coded, and built a Simon Says game using limited parts

Mechanical Engineering Project Dec 2020
- Designed a 3D model of a rocket glider with folding wings, tested for lift and drag

High School Yearlong Project Sep 2017 – Mar 2018
- Designed and coded a real-time strategy computer game in C++

Wooden Sea Kayak at Chewonki Boat Builders Jul 2017 – Aug 2017
- Constructed and field tested a wooden, fiberglass, and epoxy sea kayak as part of Chewonki Boat Builders Program

ADDITIONAL INFORMATION

Technical Skills: Solidworks, Design for Manufacturing, Robotics, Iterative Design, Photoshop, Excel, Python, C++
Non-Technical Skills: Strong Oral and Written Skills, Leadership, PowerPoint, Collaboration, Spanish (basic)
Citizenship: Dual USA & Canada