## Theo Usher

## tsu2107@columbia.edu • LinkedIn

#### **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 design and manufacturing of the electronic components of the rocket with a 6-person team
- 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 \$15,000 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