Joy He

978-482-6371
joy.he@columbia.edu
https://joyhe208.github.io/joyhe.github.io/

WORK EXPERIENCE

Draper Laboratory, Cambridge — *High School Intern*

July 2019 - Aug 2019

- Designed/3D printed a Halbach Cylinder through Solidworks. Gathered its magnetic field data through Arduino and developed 3D visualizations in Matlab in order to analyze the feasibility of a hand-held MRI.
- Created an automated measurement system with Arduino.
- Provided the Systems Department with documentation on the building process so they can replicate it in the future.

VOLUNTEERING

Tutoring Plus, Cambridge — *Tutor and Mentor*

Sept 2017 - Jun 2020

- 1:1 program – built a relationship with middle-school student through academic/personal mentorship; attended training/advisory sessions; provided enrichment work.
- iBuild program – program facilitator's assistant; mentored 10 middle-school students as they worked on engineering-design projects

EDUCATION

Columbia University, BS — Computer Science

September 2020 - May 2024

Current Semester Courses: Accelerated Physics, Data Structures in Java, Multivariable Calculus for Engineers

Activities: Columbia Witness Webmaster, Veritas Forum E-Board, Christian Union Lumine, Intervarsity, EWB Ghana Tech Team, Superposition, SWE

Belmont High School, MA

September 2016 - May 2020

NHS scholarship recipient, Williams College Book Award, National AP Scholar with Distinction, 5x XC/T&F All-Star, New Balance Nationals Qualifier

GPA: 4.21/4.00

SKILLS

Applied Data Science + Data Visualization with Python

Arduino

MATLAB

Solidworks

Figma Prototyping/UX Design

Java

HTML and CSS

Science-based Computation

Soldering

Relevant Coursework

Multivariable Calculus and Linear Algebra @ Harvard Extension

AP CS A, BC Calc, Physics C

PROJECTS

Street Trees in Boston — *Personal, 2020 (Ongoing)*

Used Python, HTML, and public datasets to map clusters of street trees and color code Boston neighborhoods by population of vulnerable individuals.

Mindset + — *Design @ CU, 2020*

6-week design sprint culminating in a prototype for a wellness/productivity app. Conducted user research/testing and prototyped in Figma.