

# Joy He

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## WORK EXPERIENCE

### Draper Laboratory, Cambridge — *High School Intern*

July 2019 - Aug 2019

- Designed/3D printed a Halbach Cylinder through Solidworks and gathered/analyzed its magnetic field data through Arduino and Matlab in order to verify the feasibility of a hand-held MRI.
- 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.

## EDUCATION

### Columbia University, BS — Computer Science

September 2020 - May 2024

Current Semester Courses: Multi for Engi/App Sci, Data Structures in Java, Accelerated Physics

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

## 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.