

Education

Harvard University

S.B. Candidate in Mechanical Engineering, Secondary Candidate in Computer Science
GPA 3.94

May 2020
Cambridge, MA

Experience

Hardware Engineering Intern

Superpedestrian

June 2018-August 2018
Cambridge, MA

- Developed a solid mechanical model for predicting spoke tension based on acoustic response
- Documented wear and friction testing on Copenhagen Wheel access panels, spokes, and freehubs
- Prototyped lock solutions for Superpedestrian's share bike platforms

Object Recognition Research Assistant

New York University Department of Psychology and Neural Science, Pelli Lab

May 2017-August 2017
New York, NY

- Programmed a simulation of retina cell responses in MATLAB to model object recognition processes
- Leveraged SLA 3D printing and Fusion 360 to print sub-millimeter-resolution braille charts for tactile acuity testing
- Generated graphics in MATLAB for Dr. Denis Pelli's presentation on his model for visual equivalent noise

Satellite Optics Research Assistant

Harvard-Smithsonian Center for Astrophysics, Romaine Group

January 2017-May 2017
Cambridge, MA

- Performed x-ray reflectometry measurements on prototype materials for miniature x-ray optics
- Drafted custom laboratory equipment in SolidWorks to expedite lens coating and mandrel cleaning processes

Student Organizations

Harvard University Human Powered Vehicle Team

Vice President

September 2017-Present
Cambridge, MA

- Creating and teaching a curriculum of machining and engineering design classes for new members
- Designing and performing stress simulations on frames in SolidWorks
- Researching composites manufacturing methods to improve vehicle aerodynamics

Harvard Open Data Project

Data Analyst and Front-End Web Developer

October 2016-May 2018
Cambridge, MA

- Analyzed student spending habits in Python and developed visualizations in JavaScript
- Improved data catalog access page by reformatting the catalog item data structure and reducing visual clutter

Skills

CAD/CAM and Hardware

SolidWorks (CSWA Certified), Fusion 360, 3D Printing, CNC Milling, MIG Welding

Programming

Proficient at performing data analysis and modeling physics in MATLAB, Python, and C
Comfortable designing websites with HTML, CSS, JavaScript, and SQL

Spoken Language

English (fluent), Spanish (proficient)

Check out my engineering projects at agigli0.github.io