

# Alexander Giglio

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## Education

### Harvard University

S.B. Candidate in Mechanical Engineering, GPA 3.92

May 2020  
Cambridge, MA

- Relevant Coursework: Computer-Aided Machine Design, Computer Programming, Electronics

## Experience

### New York University Psychology Department

May 2017-August 2017

Research Assistant for Dr. Denis Pelli

New York, NY

- Developed visualizations for Dr. Pelli's presentations on his model for visual equivalent noise
- Modified the ISETBIO MATLAB toolbox to simulate a retinal response to noisy stimuli and estimate contrast thresholds within one order of magnitude of human experimental data
- Designed braille touch acuity charts using SLA 3D printing to investigate the phenomenon of tactile crowding

### Harvard-Smithsonian Center for Astrophysics

January 2017-May 2017

Research Assistant for Dr. Suzanne Romaine

Cambridge, MA

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

### Entyde

May 2017-Present

Chief Design Officer

Cambridge, MA

- Designing enclosures and intake mechanisms in Autodesk Fusion 360 for an end tidal CO<sub>2</sub> measuring device
- Analyzing similar products on the market to gauge the viability of design decisions

## Student Organizations

### Harvard Human Powered Vehicle Team

September 2017-Present

Secretary and Fairing Sub-team Leader

Cambridge, MA

- Organizing meetings and maintaining correspondence between faculty and students
- Researching composites manufacturing methods to improve vehicle aerodynamics

### Harvard Open Data Project

October 2016-Present

Crimson Cash Team Leader and Front-End Web Developer

Cambridge, MA

- Leading a team of students to collect data on campus cash usage and publish articles with our insights
- Applying HTML and CSS knowledge to streamline user experience on the HODP website

## Projects - [agigli0.github.io](https://agigli0.github.io)

### ES51 Turf Wars Robotics Competition

May 2017

- Worked with two other students to design, construct, and pilot a remote-controlled robot
- Robot fully designed in SolidWorks and manufactured with CNC milling, 3D printing, and laser cutting

### CS50 Final Project

December 2016

- Programmed a real-time ballistic trajectory visualization running in a web browser for introductory computer science
- Used RK4 numerical integration to incorporate a simple drag model

## Skills

### Programming

MATLAB, Python, C, JavaScript, HTML, CSS

### Spoken Language

English (fluent), Spanish (proficient)

### CAD/CAM

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

### Interests and hobbies

Photography, powerlifting, baking