Alexander Giglio

Education

Harvard University — **May 2020**
S.B. Candidate in Mechanical Engineering, GPA 3.88 — **Cambridge, MA**
Relevant Coursework: Computer Science, Computer-Aided Machine Design, Statistical Inference, Materials Science

Collegiate School — **May 2016**
Graduated Cum Laude, GPA 3.98, SAT 2390 — **New York, NY**
AP Scholar with Distinction
Varsity Baseball Team Captain

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

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
- Created the HODP logo

Entyde — **May 2017-Present**
Chief Design Officer — **Cambridge, MA**

- Designing enclosures and intake mechanisms in AutoDesk Fusion 360 for an end tidal CO_2 measuring device
- Analyzing similar products on the market to gauge the viability of design decisions

Projects

agigli0.github.io

ES51 Turf Wars Robotics Competition — **May 2017**

- Worked with two other students to design, construct, and pilot a remote-controlled robot that could climb ramps, pick up ping pong balls, and shoot them into a hoop as part of introductory computer-aided design
- Finished 2nd out of 14

CS50 Final Project — **December 2016**

- Programmed a real-time ballistic trajectory visualization that ran in-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 (intermediate)

CAD/CAM
SolidWorks, Fusion 360, 3D Printing, CNC Milling

Interests
Photography, powerlifting, baking, dogs