

# Antonio Medina

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## EDUCATION

*Master of Science* in Engineering, Design Impact Expected June 2023  
Stanford University, Stanford, CA

*Relevant Courses:* Design & Manufacturing, Embedded Electronic Systems, Design for Extreme Affordability, Design for Behavior Change

*Bachelor of Science* in Mechanical Engineering (ABET) 2015 - 2019  
Yale University, New Haven, CT | *GPA:* 3.45

*Relevant Courses:* Artificial Intelligence, Computer Aided Design & Manufacturing, Mechatronics, Electronics, Advanced Chinese, Data Structures & Algorithms

## SKILLS

SolidWorks, PCB layout, C++, Python, Git, MATLAB, Django, HTML, CSS, Bootstrap

## EXPERIENCE

**Yale University** *Design Fellow* 2019–2021

Served an advisory and managerial role to Yale students at the *Center for Engineering Innovation and Design (CEID)*. Led development of educational engineering workshops and trained CEID members on use of technical engineering equipment.

- Directed the Projects-to-Products Program, an initiative to develop successful student projects to become widely available outside of Yale through training in product design.
- Co-authored collaborative effort to develop an accessible method for screening aerosol filtration to quantify face mask quality for the Yale Hospital.
- Adapted 15 interactive design workshop series into virtual format by employing and teaching cloud-based CAD and electronics modeling software.

**Radiant Solutions** *Geospatial Software Developer Intern* Summer 2018

Backend developer on 3-person team using python and machine learning to enhance the capabilities of geospatial analysts with executable scripting tools.

- Developed dynamic web scrapers for extracting data from online databases to create compatibility with the *arcpy* python library.
- Created an executable arcmap tool for high-speed integration of geospatial data with shapefiles for datasets greater than 1 million data points.

**Yale University Bands** *Office Assistant and Web Manager* 2016 - 2018

Integrated archives into online mailing database. Developed program to embed live streams of performances into the *YUB* website.

## PUBLICATIONS

“An accessible method for screening aerosol filtration identifies poor-performing commercial masks and respirators”, *Nature Journal of Exposure Science and Environmental Epidemiology*, August 2020

“Spherical Harmonics: Novel Musical Instrument Development at the Yale CEID”, *Proceedings of ISAM 2019*, October 2019

## ACTIVITIES

**Yale Precision Marching Band** *President, Drum Major, Saxophonist* 2015 - 2019

Conduct 120-member ensemble at rehearsals and performances. Led recurring music composition tutorials for band members.

- Orchestrated 35 unique pieces using Sibelius 8 notation software.

**Yale Scientific Magazine** *Feature Writer* 2015 - 2017

Published articles on popular science topics for the online blog covering movie physics, stereolithography, computer graphics and air pollution.