

# Robert Jomar Malate

Email: robertjomarmalate@college.harvard.edu | Phone: (617) 710-4616 | LinkedIn: www.linkedin.com/in/robjmal

Website: <https://www.robjmal.com/>

## EDUCATION

### HARVARD UNIVERSITY

Expected Graduation: May 2021

#### S.B. Mechanical Engineering, Minor in Computer Science

GPA: 3.6/4.0

Coursework: Introduction to Robotics; Computational Structural and Solid Mechanics; Engineering Problem Solving and Design (Systems Engineering); Design and Abstraction in Computation (Intro to Computer Science II); Electronics for Engineers

## WORK EXPERIENCE

### WYSS INSTITUTE | Microrobotics Laboratory

Cambridge, MA

#### Undergraduate Research Assistant

January-May 2020

- Assisted with designing and manufacturing wings for experimentation for the development of a robot design optimization tool.
- Designed joints for a novel vertical hopping robot.
- Conducted a finite-element analysis using ABAQUS to optimize Robobee wing frame design.

### BUSEK | Electrospray Group

Natick, MA

#### Aerospace Engineering Intern

May-August 2019

- Designed and implemented a LabView program to control satellite thrusters during testing.
- Participated in preparing satellite propulsion components for testing and assembly.
- Debugged testing-system sub circuit to increase thruster testing time.

### GOOGLE, LLC | Google Ads Infrastructure

Mountain View, CA

#### Engineering Practicum Intern

May-August 2018

- Developed a web application that serves as an internal debugging tool using C++ and AngularDart, reducing average lookup time from 2 hours to 10 minutes.

## EXTRACURRICULAR ACTIVITIES

### HARVARD UNDERGRADUATE AERONAUTICS (HUAERO)

Cambridge, MA

#### Founding Member, Aircraft Research and Development Lead

August 2019-Present

- Designed aircraft to reduce manufacturing cost and increase competition performance.
- Research and experimented with different manufacturing methods combined with rapid prototyping principles to guide team in manufacturing aircraft.

### HARVARD UNDERGRADUATE ROBOTICS CLUB (HURC)

Cambridge, MA

#### Co-Project Manager | Unmanned Aerial Systems (UAS)

August 2018-June 2019

- Managed electromechanical and administrative aspects of the project, placing top 20 among 75 teams in the International AUVSI-SUAS competition.
- Worked with the Hardware subteam with aircraft assembly and test flights.
- Wrote documentation on airframe technical report.

#### Mechanical Engineer | PacBot

October 2017-May 2018

- Designed and manufactured computer vision target for PacBot Project using SolidWorks, Eagle, and 3D Printing.
- Drafted several robot chassis designs and component upgrades using SolidWorks.

## SKILLS

- **Engineering:** Project management; Rapid prototyping; Manual & CNC Machining; Technical documentation
- **Design and Analysis:** CAD (SolidWorks); Finite Element Analysis (ABAQUS); MATLAB; LabVIEW
- **Programming Languages:** Python; C/C++
- **Languages:** Mandarin Chinese (Intermediate-Speak/Read/Write)