

# ROBERT JOMAR MALATE

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## EDUCATION

### Harvard University

Expected May 2021

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

- Relevant Experiences: Electronics for Engineers; Finite Element Analysis; Intro to Robotics; Problem Solving and Systems Engineering
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## WORK EXPERIENCE

### Wyss Institute for Biologically Inspired Engineering

Jan. 2020 - May 2020

*Microrobotics Laboratory Undergraduate Research Assistant*

- 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 Co.

*Aerospace Engineering Intern (Electrospray Group)*

May 2019 - Aug. 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 subcircuit to increase thruster testing time.

### Harvard University Aeronautics (HUAERO)

Aug. 2019 - Present

*Founding Member, Aircraft Research and Development Lead*

- Led first aircraft research and development process to improve aircraft efficiency and reduce aircraft-related costs.

### Harvard Undergraduate Robotics Club (HURC)

*Co-Project Manager (Unmanned Aerial Systems [UAS])*

Aug. 2018 - Jun. 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.

### Google, LLC

*Engineering Practicum Intern*

May 2018 - Aug. 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.
  - Familiar with Machine Learning through Google's Internal Classes
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## PROJECTS

### Flight Simulator

Apr. 2019 - May 2019

- Designed and built a simple flight simulator for my *Electronics for Engineers* course.
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## 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++

**Foreign Languages:** Mandarin Chinese (Intermediate, Speak-Read-Write)