

# Michael Mong

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## EDUCATION

Carnegie Mellon University

B.S. in Mechanical Engineering

Minor in Robotics

May 2020 | Pittsburgh, PA

GPA: 3.58/4.0

## COURSEWORK

### Engineering

- Robotic Systems Engineering
- Rapid Prototype Design
- Perspectives on Industrial R&D
- Electromechanical Systems Design
- Feedback Control Systems
- Statics & Stress Analysis
- Robot Kinematics & Dynamics

### Computer Science

- Fundamentals of Programming and Computer Science
- C++ for Engineers
- Applied Machine Learning

## PROTOTYPING SKILLS

### Fabrication

Mill • Lathe • 3D Printing

Laser Cutting • CNC

Injection Mold Design

### Software

SolidWorks • LabVIEW • C++

Python • MATLAB • Java

Arduino • Fusion360

## RELEVANT EXPERIENCE

### **Standard Motor Products** | *Mechanical Process and Test Engineer*

August 2020 - Present

- Create LabVIEW libraries to interface with 3<sup>rd</sup>-party hardware
- Maintain current production equipment by fixing issues that arise, modifying parameters, and adding new features

### **REV Robotics** | *Mechanical Engineering Intern*

Summers 2016, 2017 & 2019

- Designed injection molded electronics case ready for mass production and a multifunctional adapter to mount sprockets to wheels and shafts
- Created mockups of potential products and prepared engineering drawings for manufacturers
- Analyzed system to determine optimal lengths for belts and new hardware
- Programmed various robots using Java
- Proposed and implemented structural changes to robots which resulted in increased durability & safety
- Rendered models & compiled instructions for use in educational guides
- Troubleshoot issues with build system to determine parts to be added

### **DEKA Research and Development** | *Mechanical Engineering Intern*

Summer 2018

- Designed fixtures to manufacture and test production line parts
- Created sheet metal and 3D printed parts to mount sensors and electronics

## DESIGN PROJECTS

### **Meal Assembly Robot**

Fall 2019 – Spring 2020

- Used system design principles to prototype a meal assembly robot

### **Dynamic Gripper**

Fall 2018

- Worked in a team of four to design and create a lightweight gripper to hold an object while swinging freely
- Used carbon fiber to create the lightest gripper in the class weighting 23.4 grams which was 116.6 grams below the average

## ADDITIONAL EXPERIENCE

### **IdEATe** | *Tech Advisor & Teaching Assistant*

Fall 2017 – Spring 2020

- Assist students with projects and using makerspace resources
- Serve as a Teaching Assistant for a SolidWorks & laser cutting course