

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 • Creo • C++

Python • Fusion360 • Java

MATLAB • Arduino

Adobe Illustrator

RELEVANT EXPERIENCE

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

Rock Climbing Grip Assist Device

Spring 2020

- Designed and prototyped a device to increase rock climbing time

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

Optimal Bracket

Fall 2018

- Designed and optimized a 0.82 gram bracket to hold 25lb weight

ADDITIONAL EXPERIENCE

IDeATe | *Tech Advisor & Teaching Assistant*

Fall 2017 - Present

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