Michael Mong

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Design Portfolio: www.mmong.me

EDUCATION

Carnegie Mellon University

BS in Mechanical Engineering

May 2020 | Pittsburgh, PA

GPA: 3.36/4.0

Jesuit College Preparatory

High School Diploma

2016 | Dallas, TX

GPA 98.98/100

COURESEWORK

Engineering

- Design 1
- Rapid Prototype Design
- Perspectives on Industrial R&D
- Statics & Stress Analysis
- Dynamics
- Thermodynamics
- Fluid Mechanics
- Introduction to Electrical and Computer Engineering

Computer Science

- Fundamentals of Programming and Computer Science
- C++ for Engineers'

PROTOTYPING SKILLS

Fabrication

Mill ● Lathe ● 3D Printing

Laser Cutting ● CNC

Software

SolidWorks ● Creo ● C++

Python ● Fusion360 ● Java

MATLAB ● Arduino

DESIGN PROJECTS

OPTIMAL BRACKET | FINAL CLASS PROJECT

Fall 2018

- Designed lightweight bracket to hold 25lb weight and optimized using FEA
- Factored in manufacturing tolerances as we did not make our own parts

CRANE | FINAL CLASS PROJECT

Spring 2018

- Designed lightweight crane which lifted a 1lb weight over a nonlinear path

WALL-E ROBOT | REV ROBOTICS PROJECT

Summer 2017

- Designed, fabricated, & programmed a miniature WALL-E using only REV parts

MOUSETRAP-POWERED CAR | FINAL CLASS PROJECT

Spring 2017

- Created mousetrap car that traveled 12 feet overcoming 1" by 2" speed bumps
- Utilized living hinges laser cut into the body to create a suspension system that allowed the car to achieve first place in the competition

WORK EXPERIENCE

IDEATE | TECH ADVISOR & TEACHING ASSISTANT

Fall 2017 - Present

- Assist students using makerspace resources
- Conduct maintenance on tools & machines
- Serve as a Teaching Assistant for a SolidWorks & lasercutting course

DEKA | MECHANICAL ENGINEERING INTERN

Summer 2018

- Designed fixtures to manufacture and test production line parts
- Created sheetmetal and 3D printed parts to enclose electronics and mount sensors
- Maintained and troubleshot issues with Form2 printers

REV ROBOTICS | MECHANICAL ENGINEERING INTERN

Summer 2017

- Designed & fabricated robots for educational & promotional purposes
- Programmed various robots using Java
- Proposed & implemented structural changes to a robot for educational use which resulted in increased durability & safety

Summer 2016

- Rendered models for use in Educational Guides & compiled step by step build guides for basic robots
- Designed educational robots using SolidWorks with the new REV product line which were later used to determine sell quantities
- Troubleshot issues with build system to determine parts to be added