Michael Mong

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EDUCATION

CARNEGIE MELLON UNIVERSITY
BS in Mechanical Engineering
May 2020 | Pittsburgh, PA
GPA: 3.24/4

JESUIT COLLEGE PREPARATORY
High School Diploma
GPA 98.98/100
2016 | Dallas, TX
National Honor Society Member
Graduated with Honors

COURSEWORK

Engineering
- *Fundamentals of Mechanical Engineering*
- *Introduction to Electrical and Computer Engineering*
- *Perspectives on Industrial Research and Development*
- *Rapid Prototype Design*
- *Statics & Stress Analysis*
- *Thermodynamics*
- *Fluid Mechanics*

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

SKILLS

SOFTWARE
Certified SolidWorks Associate
Python •Fusion 360 • Java
C++ • MATLAB • Arduino

FABRICATION
Laser Cutting • 3D Printing
Lathe • Mill • Solder

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

REV ROBOTICS | Mechanical Engineering Intern
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 new parts to be added

Summer 2017
- Designed & fabricated various 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

LEADERSHIP

FRC 2848 THE ALL SPARKS | President
2013 – 2016
- Designed drive train of 2018 competition robot & coordinated integration between the different sub-systems of the design team while president of team
- Served as captain of a FIRST Tech Challenge team as well as a mentor to 4 FTC teams & a FIRST Lego League team
- Led prototype team responsible for development of robotic claw assembly
- Led robot maintenance and repair during 2014 FRC World Championship

RESEARCH

UNIVERSITY OF TEXAS AT DALLAS : TENSEGRITY ROBOT RESEARCH
Summer 2015
- Prototyped icosahedron & serpentine tensegrity robots controlled by the contractions of nylon artificial muscles

PROJECTS

WALL-E ROBOT | REV Robotics Project
Summer 2017
- Designed, fabricated, & programmed a miniature WALL-E using only REV parts

RUBIK CUBE SOLVER | REV Robotics Project
Summer 2017
- Created a Rubik Cube Solver which could fully interact with the cube
- Programmed Solver in Java implimenting a PID controller

MOUSETRAP-POWERED CAR | Final 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