MATTHEW K. CHENG

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CAREER SUMMARY

Mechanical Engineering graduate with a passion for design and manufacturing. Highly capable leader, having successfully led my senior design project to completion. Strong foundation in design and testing due to 5 years of using SolidWorks and 7 months of engineering work experience. Currently seeking an opportunity to grow in a fast-paced environment with a team that can utilize my hands-on experience in design and manufacturing.

SOFTWARE & SKILLS

- CSWA (Certified SolidWorks Associate), AutoCAD [CAD]
- MATLAB, C/C++ [Coding Language]
- Microsoft Office Suite & Microsoft Project
- Machine Shop, MIG Welding
- 3D Printing
- Mechatronics/Electro-Mechanical
- GD&T, Design for Manufacturing & Assembly (DFMA)
- Chinese (Mandarin & Cantonese)

WORK EXPERIENCE

Mechanical Engineer, California Environmental Engineering, LLC. May 2019 – August 2019
Santa Ana, CA

- Set up testing equipment and prepped automobiles onto chassis dynamometers for emission testing
- Calibrated tools and emission test cells in the lab for EPA and ARB certification
- Executed emission tests on automobiles for California certification by verifying that the emissions were within EPA and ARB standards
- Monitored testing progress and communicated results of multiple client projects concurrently
- Created an instruction manual for the assembly of the company's line of Greenkraft heavy-duty trucks

Junior Mechanical Engineering Intern, ACDelco/Durofix June 2018 – August 2018
Rancho Cucamonga, CA

- Worked specifically with R&D in ACDelco's automotive power tool division
- Executed specification reviews and benchmark verifications of ACDelco's new line of automotive power tools
- Analyzed and repaired faulty customer tools through comprehension of detailed explosion diagrams

DESIGN PROJECTS & EXPERIENCE

Autonomous Fire Suppression Robot (Senior Design Project) September 2018 – March 2019

- Led a team of 4 in designing and building a working prototype of a robot that is able to autonomously detect and extinguish a fire
- Fabricated the robot out of sheet metal using CNC plasma cutting, MIG welding, and other machine shop fabrication methods
- Programmed the robot's autonomous controls with flame sensors, linear actuators, and an Arduino microcontroller using C/C++

UCR Formula SAE (Society of Automotive Engineers) September 2017 – June 2018

- Designed the mounting arm points that connects the wheel to the chassis based on a pre-designed chassis (SolidWorks)
- Developed holds for the rack and pinion of the car to prevent unwanted horizontal and vertical movement of the part

UCR UAS (Unmanned Aerial Systems) September 2016 – June 2017

- Researched and engineered working wing flaps that enhanced the drone's ability to create lift and control of horizontal movement
- Successfully designed the drone's package deployment mechanism

ePortfolio

- https://matthewcheng.carbonmade.com/

EDUCATION

University of California, Riverside – Riverside, CA September 2014 – March 2019

- Bachelor of Science: Mechanical Engineering (Concentration: Design & Manufacturing)
- Cumulative GPA: 3.32

Relevant Coursework

- *Engineering Graphics and Design, Materials Science, Machine Design, Senior Design, Finite Element Method (FEA), Statics, Dynamics, Engineering Circuit Analysis, Laser & Optics, Heat Transfer*