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Dorian Kinoo Crutcher

👤 dkcwebdev.com in www.linkedin.com/in/dorian-crutcher 🏫 UC Davis BS Mechanical Engineering GPA 3.2

Gener8 *(Engineering Consulting Firm)*

Mechanical Engineer (Jan 2019 – Present)

→ Utilized Solidworks for mechanical design, drawings utilizing GD&T and thermal analysis of products
→ Conducted presentations to provide design and feasibility input on customer products
→ Communicated with outside manufactures to create prototypes and products
→ Designed (with SW) and built prototypes in house for project validation and testing.

Engineering Student Startup Center

Student Manager/ Engineering Workshop Coordinator (Mar 2016 – Dec 2018)

→ Oversaw the creation of new workshops and drafted new teaching materials and tools
→ Drafted workshop content for: Frontend Web Dev, Unity Game Development
→ Provided students with design suggestions and worked with them to help them reach their creative vision for their webpage

Chirp Microsystems (Ultrasonic Sensor Manufacturing and Implantation)

Engineering Intern (June 2018 – Sept 2018)

→ Designed and manufactured test setups for ultrasonic sensors using Solidworks and KiCAD
→ Drafted and 3D printed modified VR controller designs to be outfitted with ultrasonic sensors
→ Uitlized R to perform data analysis to see acoustic output trends of sensors
→ Conducted presentations for projects and data analysis from ultrasonic sensor tests

Projects

Skills

HTML/CSS/JS

UC Davis Human Mobility Lab – C++/JS Processing/Solidworks (Sept 2018 – Dec 2018)
Double Pendulum Robot Closed Loop Controller
→ Utilize C++ to develop feedback loop controller design to provide stable motion to the robot
→ Designed user-friendly GUI to control robot
→ Created GUI with Javascript and Processing libraries to modify controller variables, provide input parameters for double pendulum robot

React Native

Python

Gener8 – Python/HTML/CSS/Javascript
Camera Products/Fixtures Design
→ Utilized python to create scripts that would calculate the factor of safety for spring assemblies, and determine cable lengths
→ Used HTML/CSS/Javascript to create todo list app and interactive libraries to keep track of part information (spring specifications, cable specifications for the use of easy lookup using hashtables)

C/C++

Jupyter Notebooks

UC Davis Senior Design– C++/Solidworks/Fusion 360
Automated Recycling Sorter (Senior Design Project)
→ Utilized C++ to design firmware that runs the stepper motor for the project, as well as utilizes an ISR to open a trap door for aluminum cans for the automated recycling sorter

Bootstrap

Budgeting App – HTML/CSS/Javascript
Created a budgeting app that allows the user to keep track of their income vs their expenses. Automatically calculates and displays the percentage for the user to know the individual percentage of their income their expense utilizes

Tensorflow