Mac Greene

✉ macgreene14@gmail.com   📞 (+1) 706.768.6743   in ○

EDUCATION

FORT LEWIS COLLEGE | B.S. in Engineering
August 2015 - April 2019 | Durango, Colorado, U.S.A.

EXPERIENCE

NEXTRACKER | Project Engineer
February 2020 - August 2022 | Nashville, TN

- Facilitated the design of 1+ gigawatts of utility solar projects, from initial bidding to site construction
- Collaborated with civil, electrical, and structural engineering groups to produce comprehensive design packages
- Functioned as the lead project engineer for the NX Gemini product, establishing processes and documentation
- Value engineered projects to deliver cost-effective designs, saving on the order of millions of dollars
- Developed novel software tools to streamline engineering workflows, including site design and solar performance modeling

SANDIA NATIONAL LABORATORY | Software Engineer (Internship)
July 2018 - January 2019 | Durango, CO & Albuquerque NM

- Developed a script to automate the creation of Finite Element Analysis (FEA) models from user-specified design parameters
- Performed a parametric investigation of the nonlinear structural response for a cantilevered beam using custom software
- Successfully applied machine learning techniques to predict failure in structural model given loading parameters

September 2018 - April 2019

- Designed, fabricated, and tested a remote sensing device capable of sensing irradiation, air composition, & acceleration
- Created a python application for cataloguing timestamped sensor data, uploading to an web based dashboard

FLC ROBOTICS LAB | Dashboard for Remote Monitoring of Water Quality
January 2018 - April 2018 | Durango, CO

- Developed web-based system for analyzing & visualizing municipal water quality data collected via a wireless sensing device
- Designed an online platform for viewing water data in real-time, put to use by firefighters operating "water scooper" aircraft during the 416 fire in Durango

CORNELL UNIVERSITY | Materials Science Research
June 2017 - July 2017 | Ithaca, NY

- Designed a loading fixture capable of placing test samples in 3-point and 4-point bending loading scenarios
- Created an FEA model of a structure undergoing bending, validated model with non-destructive stress measurements
- Video Interview: `https://tinyurl.com/GreeneCornell`

VILLAGE AID PROJECT | Water System Design for Developing Communities
September 2015 - May 2019 | Durango, CO

- Directed a team of students in the design and construction of a reinforced concrete water storage tank in Myanmar
- Surveyed coordinates, then designed a model of a gravity-fed water system, which is currently serving upwards of 100 households in rural Nicaragua
- Developed a key indicator survey for monitoring access to water, sanitation and hygiene (WASH) services, ported into a cloud based application using Open Data Kit

SOFTWARE

- HTML • CSS • Javascript • Git
- Python • MySQL • AutoCAD • Civil 3D • PVSyst
- PowerBI • Confluence • Jira

COURSEWORK

- Drafting and Design • Alternative Energy Systems
- Measurements & Instrumentation • Fluid Dynamics
- Mechanics of Materials • Electrical Networks
- Full Stack Web Development