

CHASE MEMMER

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727-410-1943 ♦ Tampa, FL 33556

EDUCATION

University of Alabama, Dec 2022

B.S. in Mechanical Engineering (Cum Laude)

B.S. in Electrical Engineering (Cum Laude)

Honors College

Creative, gifted problem solver specialized in robotics, prosthetics, and mechatronics.
A collaborative group leader who evaluates options with the foresight of a multidisciplinary background.

WORK EXPERIENCE

Quincy Air Compressor

R&D Engineering Co-op

Bay Minette, AL

May 2019 – May 2020

- Designed prototype testing procedures and analyzed key measures of performance through LabVIEW and Excel VBA
- Optimized compressor performance through iterative design processes in Solidworks
- Sourced and oversaw contractors on projects up to \$15,000
- Implemented and maintained ISO, ASME, DOE, third-part standards and OSHA safety measures

APG Electric

Engineering Intern

Tampa, FL

June 2015 – July 2015

PROJECTS

EMG-Controlled Simple Robotic Arm

Mechatronics Engineer, Software Engineer, Research

Tuscaloosa, AL

August 2022 – Current

- Building three degree-of-freedom (Elbow, Wrist, Grasp) simplified arm
- Implementing Pattern Recognition Machine Learning to extract features from EMG data

Battery Management System for ABEX Satellite

Team Lead, Embedded Hardware Engineer, Embedded Systems

Tuscaloosa, AL

January 2022 – Current

- Designed PCB for microcontroller-led Maximum Power Point Tracking of 8S2P solar array
- Designed PCB for the Battery Management System including three independent batteries, four dynamic solar arrays, three output rails, emergency stop and dynamic consumption
- Implemented closed low-level PID control loop and open high-level control loop for slave-master relationship with satellite command system

NASA's Robotic Mining Competition

Mechanical Team Lead, Mechanical Engineer

Tuscaloosa, AL

September 2018 – May 2020

- Introduced new mechanical design that doubled production and won nationwide championship
- Fully modelled and simulated 1000+ parts in Solidworks
- Acted as Technical Lead and presented design at the NASA consortium in Capitol Hill, Washington D.C.

Pic-n-Place Robotic Arm (SCARA)

Mechatronics Engineer

Tuscaloosa, AL

January 2021 – May 2021

High-Voltage Dielectric Elastomer Actuator

Embedded Hardware Engineer, Analog Systems Engineer

Tuscaloosa, AL

January 2022 – May 2022

SKILLS

Software Tools

Solidworks, FEAs, KiCAD/Altium, PSpice/Cadence, LabView, AutoCAD, CoppeliaSim

Lab Skills

Instrumentation, Calibration, Data Acquisition, Data Analysis

Programming Languages

Matlab, C, Excel VBA, Arduino

Hardware Skills

Hand Tools, Power Tools, 3D Printing, Water/Laser Jetting, Soldering

Productivity

Microsoft Office, Microsoft Teams, Slack

Certifications

EIT, Solidworks (Add Letters here), Matlab, Graphics

Outside Interests

World Travelling, Hiking (Appalachian Trail, Solo), Fishing, Reading, Research