

Sean McGee

Portfolio: www.smcgee.info

Email: smcgee8894@gmail.com

Phone: (951) 663-9746

Education

Northern Arizona University, Bachelor of Science in Mechanical Engineering

- Minor in Electrical Engineering
- Expected graduation: December 2021
- Cumulative GPA: 3.03 / 4.00

Experience

Project Manager, General Atomics EMS Satellite Test Fixture Capstone Project

- Developed and evaluated various system and subsystem design concepts using QFD, FMEA, and Pugh concept selection
- Generated parametric CAD models for system components, optimizing based on hand calculations, FEA results, and manufacturability
- Formulated motor control algorithm using Simulink, validated through Simscape multibody dynamics simulations
- Delivered high-quality reports and presentations to update client on project progress, results, and timeline

Experimental Methods Project

- Installed thermocouples along various surfaces of heat sink, measured temperatures at steady-state conditions using NI LabVIEW and NI-9213 temperature input module
- Simulated experimental conditions using ANSYS and MATLAB PDE Toolbox, which fell within $\pm 5^\circ\text{C}$ of experimental results

Skills

Programming: C/C++, MATLAB, Python, Processing, JavaScript

Simulation: SOLIDWORKS, ANSYS, Simulink, Simscape

Control systems: Root locus, PID tuning, state space representation, LQR/LQE

Data analysis: NI LabVIEW, MATLAB, Excel, R

Electronics: Arduino, ESP8266/ESP32, Raspberry Pi, FPGAs