

Greg Emmen

Wixom MI
(248) 495-0680
greg.emmen@gmail.com
www.linkedin.com/in/GregEmmen

EXPERIENCE

Software & Controls Engineer

GM Defense | Milford MI | September 2021 - PRESENT

- Rapid prototyping of control systems for military vehicles
- Develop unique solutions to meet customer specifications
- Support team in pursuing unique military contracts and opportunities

Controls Design Engineer

General Motors | Milford MI | December 2018 - September 2021

- Lead a cross-functional team to deploy HV propulsion and safety features
- Develop software and algorithms to meet or exceed system requirements
- Coordinate unit and behavioral testing of software with global team

Plant Modeling & HIL Integration Engineer

General Motors | Milford MI | June 2015 - December 2018

- Technical expert on the implementation of software to HIL benches
- Built plant models to simulate functionality not available through hardware
- Managed multiple HIL benches to meet customer requirements for testing

Facilities Engineering Intern

Cummins Inc | Columbus IN | June 2014 - August 2014

- Assisted implementing an ISO 50001 energy management system
- Troubleshoot failures in air handler and exhaust fan units for test cells

PROJECTS

Regenerative Braking Control of a Brushless DC Motor Drive

Fall 2021

- Model built using MATLAB/Simulink for basic vehicle energy and dynamics
- Testing of modified six-switch inverter strategy for brake torque and regen
- Analyzed permutations of method to quantify the effect of the strategy

Satellite Attitude Control Model

Fall 2020

- Specify set of equations to govern movement of a rigid body in zero-gravity
- Developed Simulink model for attitude control system on a satellite

CSU EcoCAR3 Controls Team, year one of competition

Fall 2010 - Spring 2011

- Built the initial controls architecture
- Selected hardware for controls development on hybrid Chevrolet Camaro
- Supported HV battery design and testing capability

EDUCATION

MSE in Energy Systems Engineering

University of Michigan - Dearborn

2019 - 2021

BS in Mechanical Engineering

Colorado State University

2011 - 2015

SKILLS

- MATLAB/Simulink
- dSPACE SW & HW
 - Control Desk
 - MABX II
 - CAN & RTICANMM
- New Eagle SW & HW
 - Raptor Cal
 - Raptor Dev
 - RCM & GCM Modules
- Data Acquisition and Analysis
 - ETAS tools (MDA, INCA)
 - Vehicle Spy
 - neoVI FIRE 2
- Git/Github
- Python
- C++

CERTIFICATIONS

- GM DFSS Black Belt (2017)