

## OBJECTIVE:

Engineer with a passion for learning looking for new challenges in both conventional and EV powertrain control and calibration. Career goals include furthering electrification and hybridization.

## EDUCATION:

### *Rensselaer Polytechnic Institute*

*Class of 2014*

- BS in Mechanical Engineering

### *Northfield Mount Hermon School*

*Class of 2009*

## RELEVANT EXPERIENCE:

### *IAV - Hybrid Systems Engineer at Karma Automotive*

*October 2018 – Current*

- Worked with OEM and supplier to support HVAC OBDII system development, requirements writing, testing, and issue/bug resolution
- Developed automated VBA tools to generate large portions of CARB OBDII application, saving valuable time by generated consistent and easily updated documentation

### *FCA – V8 Calibration and Development Engineer*

*August 2016-September 2018*

- Manage dyno cell test activities, process large amounts of data, generate calibrations.
- Extensive Matlab and VBA development for big data analysis to better characterize engine physics.
- Develop and test control strategies for engine and emissions control systems.
- Work has included modelling, neural network calibration, TWC calibration/characterization, and cylinder deactivation.

### *EcoMotors, Inc – Test Engineer*

*July 2014-August 2016*

- Responsibilities include data acquisition systems, dyno operation, and test plan design and execution.
- Data acquisition system requires wiring harness design and construction, IC simulation and prototyping.
- Used LabVIEW to design acquisition systems for specific tests such as torsional vibrations measurements and live compressor mappings.
- CAN bus experience included building embedded devices for reading and sending messages, constructing message lists, and debugging.

### *RPI Formula SAE Team – Engine Group Leader*

*September 2011- May 2014*

- Leadership position on student-run team that designs, builds, and races a prototype car annually.
- Used theory, Ricardo WAVE, and physical testing to design rapid prototyped intake.
- Extensive fabrication (manual machining, welding, wiring) and dyno calibration to construct car.
- Managed 10-20 students in high-stress, fast-paced environments.
- Launched public outreach programs, alumni network, and design process and documentation standards.

### *Oelschlaeger Research Group – Research Lead*

*May 2012 – May 2014*

- Initiated and directed engine dynamics group within combustion lab.
- Modified diesel one-cylinder engine for testing of fuels and built LabVIEW combustion analysis data acquisition system .
- Coauthored paper (M. Huang, S. Gowdagiri, XM Cesari, “Diesel Engine CFD Simulations: Influence of Fuel Variability on Ignition Delay”, FUEL, 2016).

## SKILLS:

### *Coding & Software*

- Proficient in Python, Matlab, VBA, and LabVIEW. Larger projects include full LabVIEW data acquisition programs, Excel VBA Add-Ins, and Matlab data processing and optimization scripts.
- MITx 6.00.1 & 6.00.2 (Python) and Certified Labview Associate Developer certifications.
- Exposure to machine learning and artificial intelligence algorithms. Completed deeplearning.ai certification under personal initiative and continue to expand knowledge and experience in this area.
- CAD experience in SolidWorks, NX, MasterCAM, and Autodesk Fusion 360. Managed large assemblies of FSAE car and generated GD&T drawings.

### *Fabrication & Electronics*

- Professional and personal experience with variety of fabrication techniques including machining and welding.
- Electronic circuit design, electronic troubleshooting, and wiring harness construction and design.
- Automotive projects range from restoration to high performance track days. Deep passion for automobiles drive both professional and personal aspects of my life.