Michael Tillapaugh

Data Scientist | Mechanical Engineer

mtillapaugh@gmail.com
310.941.6841
Santa Ana, CA

EXPERIENCE

Data Scientist

Projects

- Advanced Lane Finding – OpenCV | Github
  Computer Vision project that highlights the current driving lane.
- Lane Finding Visualization – OpenCV | Github
  Computer vision project that highlights and projects road lane lines.
- Pneumonia Detection with CNN – TensorFlow| Github
  CNN project that predicts whether or not a patient has pneumonia.

Sr. Powertrain Mechanical Design Engineer

Karma Automotive

2019 – 2020 Irvine, CA

- Primary Mechanical Design Engineer responsible for in-house design of Karma 35kWh Battery Pack. Coordinated design with Body, Electrical, Interior, and Chassis teams to ensure packaging requirements are met.
- Led design activities for all Powertrain components used on Karma Revero and Revero GT vehicles, including Gearbox, Traction Motors, Inverters, Genset, Engine Mounts, Exhaust, Fuel System, Heat Shielding, Charging and Power Conversion Systems.
- Optimized vehicle NVH (Noise, Vibration, Harshness) performance by creating Acoustic Wraps for Gearbox/Inverters/Motors.

Sr. Electro Mechanical Design Engineer – FF91 & FF81 Vehicles

Faraday Future

2017 – 2019 Gardena, CA

- Sr. Design Engineer responsible for detail design of all 12V Wire Harnesses and Components (Switches, Electrical Devices, Brackets) from concept stage to testing and validation.
- Designed plastic injection molded and sheet metal brackets for packaging of 12V components throughout the vehicle.
- Lead cross-functional design reviews of full vehicle packaging by evaluating dynamic motion envelopes, tolerances, clearances and interface requirements between parts from all vehicle groups.
- Create and vet out process that allows quick and seamless data transfer between CATIA V6 and Mentor Graphics Harness XC. Allows both systems to sync data so that information in both platforms match.

Mechanical Design

Northrop Grumman

2011 – 2017 Redondo Beach, CA

- Ability to simultaneously manage many Mechanical Ground Support Equipment projects by leading design reviews, creating build-to-print end item data packages, providing floor support for integration and test of end items.
- Experienced with a variety of manufacturing processes, materials, finishes, fasteners & hardware including aluminum, steels, honeycomb panels, thermal spacers, shims, etc.

SKILLS

Git
Github
Python
Tableau
OpenCV
SQL / PostgreSQL
TensorFlow / Keras
Deep Learning (CNN)
Computer Vision (CV)
Machine Learning (ML)
Data Cleaning / Handling
Data Processing / Visualization
Natural Language Processing (NLP)

FEA
GD&T
Solidworks
CATIA V5 / V6 (>10,000 Hours)
Team Center / SmarTeam / Enovia

EDUCATION

Data Science

Thinkful

June 2020 Irvine, CA

Bachelor of Science, Mechanical Engineering

University of California, Irvine

June 2011 Irvine, CA

FIND ME ONLINE

/michaeltillapaugh
/mtillapaugh
mtillapaugh.github.io