# Michael Tillapaugh

# Data Scientist | Mechanical Engineer

### **EXPERIENCE**

#### **Data Scientist**

**Projects** 

2019 - 2020

- 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

- Designed Karma's first in-house HV Battery Pack. Included 17% weight reduction, 29% capacity increase, and \$6000 BOM cost reduction over previous supplier-designed battery back.
- 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.

#### Sr. Electro Mechanical Design Engineer – FF91 & FF81 Vehicles Faraday Future

2017 - 2019Gardena, CA

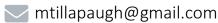
- Sr. Design Engineer responsible for detail design of all 12V Wire Harnesses and Components (Switches, Electrical Devices, Brackets) from concept stage to testing and validation.
- Designed plastic injection molded and sheet metal brackets for packaging of 12V components throughout the vehicle.
- Lead cross-functional design reviews of full vehicle packaging by evaluating dynamic motion envelopes, tolerances, clearances and interface requirements between parts from all vehicle groups.

#### Mechanical Design Engineer

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 packages, and 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.



310.941.6841

Santa Ana, CA

### **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**

Certificate, Data Science Thinkful

Jan 2020 – Jun 2020

Irvine, CA

Bachelor of Science. Mechanical Engineering University of California, Irvine Jun 2007 – Jun 2011 Irvine, CA

## FIND ME ONLINE

/michaeltillapaugh

/mtillapaugh

mtillapaugh.github.io