

Richard Ling

San Francisco, CA | Email: rzing88@gmail.com | [linkedin](#) | [github](#) | [portfolio](#)

Data Scientist with 5 years of experience and a Masters Degree in Mechanical Engineering.

Skills:

Programming Language: Python, SQL, Scala, MATLAB

Analytical Tools: Pandas, Numpy, Sklearn, Tensorflow, Statsmodel, Matplotlib, Seaborn, Pyplot, Spark, Simulink, MS Office

Design/Simulation Software: Solidworks, PTC Creo, AutoDesk Inventor

Enterprise Resource Planning Software: Exact Macola 10, SAP, Oracle, Syteline,

Spoken/Written Languages: Cantonese and Mandarin.

Projects:

Capstone Project: Car Classification with Imagery (Auto-enVision)

- Built a car classification algorithm into a web app to allow car buyers and sellers to mobilize their car research on the go with a one-step process.
- Built a web scraper tool to gather images and perform E.T.L for the algorithm.
- Used Tensorflow to custom built a convolutional neural network model and a model with Keras pretrained VGG16 on 10,000 images to classify 4 car models.
- Tuned hyperparameters on each model to achieve accuracy of 95% and 98%, respectively.

Client Project: Flood Detection with Imagery (Flood Bank)

- In a group of 3, developed a flood classification algorithm and flood detection with a pretrained model to filter flooded images and then use it to approximate its flood depth.
- Used Labellmg for image labeling and Roboflow's Yolo-v3 Pytorch pretrained model for flood detection.
- Achieved accuracy of about 70% with 1000 images and demonstrated the capabilities of the concept.
- The leading group who thought outside the box and went beyond project requirements.

Experiences:

Ametek Surface Vision Inc.

Mechanical Engineer

Hayward, CA 94544
(August 2015 – March 2020)

- Successfully completed many orders over \$100K on schedule without shortages and production delays by predicting usage with my customized data tracker and assigned tasks to the production floor to begin assembly in advance.
- Optimized multiple assembly BOM by 30% and reduced material cost by 50% by analyzing the BOM data, usage data and working with assembler to identify part redundancy and unnecessary parts.
- Reduced post-delivery order issues from customers by more than 50% in 2019 by managing production flow, working closely with customers, buyers, accountants and vendors.

Gillig LLC.

Mechanical Engineer

Hayward, CA 94545
(October 2014 - June 2015)

- Successfully implemented a safety cover from concept into production to prevent harnesses from tangling into the driver's foot area by working with drivers to understand and analyze their movements.
- Executed a customer order of over 10 buses for a worth over \$500K+ by working with the customer to custom fit a special camera to the exterior wheel panel.

NASA Ames Research Center

Mechanical Design Engineer

Mountain View, CA 94035
(June 2013 - September 2014)

- Researched and developed calibration mounts for helicopters swashplate assembly for wind-tunnel testing.
- Designed hardware capable for wind-tunnel testing by doing FEA simulation against the maximum vibration I estimated by analyzing the wind-tunnel dataset.
- Collaborated with team members and machinists to improve, optimize and reduce the cost of the calibration mount.

Education/Certifications:

General Assembly

San Jose State University

University Of California, Davis

Engineering-In Training Certified: Mechanical (#139866)

Data Science Immersive Program

M.S in Mechanical Engineering

B.S in Mechanical Engineering

(March 2020 - June 2020)

GPA 3.7/4.0 (May 2013)

GPA 3.0/4.0 (June 2011)