

Len Strnad

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INDUSTRY EXPERIENCE

FALL 2017 - PRESENT

National Renewable Energy Laboratory (NREL)

Transportation Data Scientist

SPRING 2017 - PRESENT

BoulderAI

Deep Learning, Computer Vision, Nvidia TensorRT

SUMMER 2017

Human Code

Denver Startup, Internship, Deep Learning

JULY 2005 – SPRING 2017

Jewelry Design and Fabrication

Vivid Diamonds and Carla Morrison Design (examples)

EDUCATION

2015-2017 **UC Denver**
M.S. STATISTICS

2012-2015 **Cleveland State University**
MATH, STATISTICS
Cleveland, Ohio

PROGRAMMING SKILLS

· Python, TensorFlow, R, Matlab, pySpark
· AWS, GCP, Azure, Docker
· Java, OOP
· Github

CORE ACADEMIC COURSES

MATH	Real Analysis, Linear Algebra, Applied Topology, Dynamical Systems, Probability, Combinatorics
STATS	Mathematical Statistics (I & II), Linear Regression, Advanced Stats Methods, Survival and Reliability, Multivariate Stats, Machine Learning, Bayesian Statistics, Statistical Consulting
CS	Data Structures and Algs, OOP Design

PROJECTS

CURRENTLY

ETL Data Ingestion with Spark (NREL)

With over 5Tb of columnar time-series data, pySpark was used to ingest CSV files into the HDFS file system with the DataFrame API. The project allows a researcher to build custom functions to perform data analysis on this time series data. The project allows for near realtime analysis of data that used to take days to process.

SPRING 2018

TensorFlow Classification Model with Jetson TX2 (BoulderAI)

A convolutional neural network was trained to predict the quality of an object for realtime inference and mechanical sorting. The model was trained with my custom Docker container, TensorFlow on an Azure instance with GPU, optimized with Nvidia's TensorRT package, and deployed on a Jetson TX2 for inference in the field.

SUMMER 2017

Diet Networks (HumanCode)

I used TensorFlow to implement Diet Networks: Thin Parameters for Fat Genomics found (here). The idea was to classify the ancestry of an individual based on genomic data where the dimension of the data is much larger than the number of observations. I also created a docker container to manage the complex genomic data tools and make inference.

SUMMER 2017

Deep Generative Models: Facial Images (Human-Code)

To improve upon image generative models, I used (this) paper in TensorFlow. The idea is to use three loss functions: KL divergence, decoder reconstruction/generation and the comparator reconstruction error. The comparator reconstruction uses Facebook's pretrained facial detection net, FaceNet.

JAN 2017

Detecting Electric Vehicles

I constructed feature vectors for training NNets, Decision Trees, and SVMs to predict which houses have an electric vehicle. The data are 1500 houses with electric meter reading every half hour for two months. (pdf)

DEC 2017

Kernel Ridge Regression (School)

This was a final project for my Advanced Statistical Methods course. The project is an overview of Reproducing kernel Hilbert Spaces, Tikhonov Regularization, Kernels, Model Selection in the context of Ridge Regression. (pdf)

DEC 2017

Regularized Regression (School)

Multiple Linear Regression, Principal Component Regression, Lasso Regression, Ridge Regression, Partial Least Squares Regression. Compared model performance after models selection with AIC, BIC, CV. (github)