Len Strnad

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Industry Experience

Fall 2018 - Present

TruU Inc.

Bio-metric Data, Deep Learning Scientist

Fall 2017 - Fall 2018

National Renewable Energy Laboratory

Transportation Data Scientist

Summer 2017

Human Code (Acquired by Helix)

Genomic Data, Deep Learning Scientist, Internship

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**
B.S. Math, Minor in Statistics
Cleveland, Ohio

Programming skills

· **Data Science**: Scikit-Learn, Pandas, PyTorch, TensorFlow, PySpark, PostgreSQL...
· **Familiar with**: Linux, Bash, Docker, AWS, GCP, Azure, NREL HPC

Core Academic Courses

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

Recent Projects

Current

Bio-metric Data Classification

Deep convolutional neural networks are being used in this project to classify users for authentication purposes. Throughout the project I have implemented Mixture of Experts, ArcFace and Class Activation Maps among others in PyTorch.

Current

Dataset Management

When there is more data than available memory we need a way to train on data out of memory. I constructed, own, and manage a dataset package/repo that sits on top of LMDB that allows users to iterate through the data as if it were in memory for typical gradient descent learning algorithms.

Summer 2018

Vehicle Behavior: Time Series Analysis (NREL+EPA)

Analysis and characterization of time series data of fleet-vehicle activity. Common time series feature vectors were constructed and used for cluster analysis for fleet characterization. I regularly reported my results to the EPA.

Spring 2018

ETL Data Ingestion with Spark (NREL)

PySpark is being used to ingest over 5Tb of columnar time-series data. The project allows researchers to build custom transforms in order to load data for final analysis.

Spring 2018

Image Classification Model

A CNN in TensorFlow was designed and trained to predict the quality of an object for real-time inference and mechanical sorting.

Summer 2017

Diet Networks (HumanCode)

TensorFlow was used to implement Diet Networks: Thin Parameters for Fat Genomics. The project aimed 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. A docker container was created and used to manage the complex genomic data tools and to make inference.

Summer 2017

Deep Generative Models: Facial Images

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.