Randall Pulido

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Education

California Institute of Technology – B.S., Computer Science 2022

Work Experience

Lyft Inc. – Machine Learning Software Engineer, Price Optimization Team 10/2022 - 4/2023

Active developer on estimated $20 million revenue project for rideshare pricing.

- Built an architecture to support the maintenance and observability of team's price adjustment models thus preventing model degradation, saving engineering time/resources, and allowing insights into key metrics.
- Conceived and implemented a novel model performance drift detection and retraining procedure.
- Collaborated with a cross-functional team to design an end-to-end, real-time, bias-learning, deep learning model estimated to reduce the error of the primary price adjustment model by 3-5%.
- Processed, cleaned, utilized, and interpreted months of market data and model error metric data.
- Performed on-call responsibilities such as system maintenance and resolving system failures.

Edammo Inc. – Machine Learning Software Engineer Intern 5/2021 - 1/2022

Explored, implemented, tested, and integrated novel approaches to improve the company's ML SaaS models.

- Implemented a validation technique for model selection / ensembling using a nearest neighbor approach - faster and 4% more accurate than 10-fold cross validation.
- Developed a dimensionality reduction algorithm using an extreme learning machine approach and the whale optimization algorithm - 100% faster than standard methods with comparable accuracy.
- Implemented an anomaly detection and replacement algorithm using dimensionality reduction and k-scan methods.

Project Experience

Predicting Covid-19 Vaccination Rates in U.S. Counties 3/2021 - 6/2021

- Tested numerous learning algorithms / techniques including neural networks, gradient boosting, deep autoregression, Facebook prophet model, and LSTM, trained on demographic data, to achieve >98% predictive accuracy.
- Analyzed feature importance to design a more equitable distribution of vaccines.

Exploring Noise Propagation of Adversarial Images 4/2021 - 6/2021

- Collaborated on a paper quantifying image similarity, via applying various error metrics, throughout image evaluation by three adversarially-trained CNNs with differing denoising architectures to understand noise propagation of adversarial images.

Skills

Languages: Python, SQL, C, C++, Java, R, OCaml, Haskell, MATLAB

Tools: Git, Scikit-Learn, Numpy, Pandas, PyTorch, TensorFlow, Keras, XGBoost, Hive, Kubernetes, Airflow, AWS, Linux

Technical Skills: Programming Methods, Data Structures, Algorithms, Machine Learning Methods, Learning Systems, Data Mining, Statistics, Probability Models, Computing Systems, Distributed Computing