ISOLDE FAIRCHILD

MACHINE LEARNING ENGINEER

EDUCATION

Bachelor of Science
Computer Science
University of Pennsylvania
2011 - 2015
Philadelphia, PA

SKILLS

PyTorch
TensorRT
Apache Spark
MLflow
OpenAI Gym
SHAP
Fairlearn
LSTM
One-Class SVM
Apache Hadoop

WORK EXPERIENCE

Machine Learning Engineer

Aramark

2020 - current / Philadelphia, PA

- Developed a series of MLflow pipelines that standardized feature engineering processes, contributing to a 12% decrease in bugs during model training phases.
- Enhanced feature selection for meal preference algorithms using SHAP, creating a personalized menu recommendation system that boosted customer satisfaction scores by 18%.
- Conducted A/B testing using models trained with PyTorch, directly uplifting user ***engagement on the Aramark mobile app by 17%.***
- Led a Hadoop-based sentiment analysis engine that processed 54% more customer feedback messages every day, enhancing overall customer service operations.

Data Scientist

Vanguard

2017 - 2020 / Philadelphia, PA

- Formed a TensorRT-powered anomaly detection system that identified discrepancies in transactional data 74% faster, significantly minimizing the risk of financial errors.
- Designed a multi-factor authentication model for customer accounts, resulting in a ***41% decrease in unauthorized account access attempts.***
- Implemented Fairlearn principles in model development, gaining a 32% cut down in bias metrics across predictive modeling.
- Optimized Vanguard's portfolio risk analysis models with Spark MLlib, reducing model run times by 63% while analyzing more data points than past methods.

Data Analyst

Comcast

2016 - 2017 / Philadelphia, PA

- Established a One-Class SVM algorithm to find and flag anomalous network traffic, resulting in an ***18% decrease in undetected fraud cases.***
- Automated regular reporting tasks using advanced data analytics scripts, saving the team approximately 216 hours of manual work.
- Improved streaming quality for Comcast's video-on-demand service by using an LSTM-based traffic prediction model, lowering buffering times by 22.7%.
- Used OpenAI Gym to simulate customer service scenarios to train models, reducing average call handling time by 1.4 hours for technical support inquiries.