Jing Gong

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SUMMARY

- ⋆ Seeking Full-time machine learning/data science position
- Experience in applying Machine Learning, Data Mining and Statistical Modeling for prediction and optimization
- Experience in data manipulation with SQL and modeling in distributed big data systems like Hadoop and Spark
- Proficient in analyzing new features, analyzing A/B testing, visualizing and making data presentations

EDUCATION

Purdue University, West Lafayette, Indiana *Aug.2016-May.2018*
Master of Science, Mechanical Engineering

Huazhong University of Science and Technology, Wuhan, China *Sep.2012-Jun.2016*
Bachelor of Engineering, Materials Processing and Control Engineering

SKILLS

Tools: Tensorflow, Xgboost, LightGBM, Sklearn, Hadoop, AWS, SparkMLib, Tableau, Docker
Programming: Python, Java, C++, R, Matlab
Analysis: MySQL, Oracle, A/B testing, Excel

PROJECT EXPERIENCE

Kaggle Challenge: TalkingData AdTracking Fraud Detection Challenge *Apr.2018-Present*

- Extracted features from 18 billion raw data, engineered new features and tested importance to select best features
- Embedded feature vectors and implemented Deep Factorization Machine with Tensorflow and evaluated the performance via AUC
- Ensembled several LightGBM tree models with DeepFM NN models and improved AUC from 0.9185 to 0.9793

Text Mining Challenge: Text Classification on Yelp Reviews (Python), Purdue University *Jan.2017-Apr.2017*

- Built dictionary consisting of 4000 words and generated word-frequency matrix for 1.7M Yelp restaurant review data
- Adjusted feature selection via information gain and achieved 85.3% classification accuracy with Random Forests and Bagged Trees, and advanced prediction accuracy to 90.5% by Decision Trees with Adaboost
- Formulated hypothesis testing about the model performance via different feature constructions

Clustering Project: Image Clustering on Digits Data (Python), Purdue University *Apr.2017-May.2017*

- Visualized digits data by projection in 2D by t-SNE, and clustered data by PCA with dimensionality reduction from 784 to 10
- Advanced cluster analysis by hierarchical clustering with single/complete/average linkages and visualized clusters by dendrogram

Exploratory Analysis and Visualization on Death Data (R), Purdue University *Mar.2017-May.2017*

- Visualized data by R package to compare the impact of different features on death, and explored potential relationships with death
- Evaluated the performance of Lasso and ridge regression and tuned parameters by cross validation in death predictions

RESEARCH EXPERIENCE

CausalAI Lab: Optimization under Fairness Constraints, Purdue University *Sep.2017-Jan.2018*

- Measured the causal effect of how different categories of attributes on decisions, and designed logistic regression algorithm with constraints on the unfairness measures in a small range based on graphical models
- Optimized the parameters by genetic algorithm, balanced the trade-off between prediction accuracy and causal effect, and reached 82.5% accuracy with 72.5% causal elimination on specific attributes(gender and race)

WORK EXPERIENCE

Research Asistant, Artificial Manufacturing Lab, Huazhong University of Science and Technology, China, *Sep.2015-Jun.2016*

- Designed virtual movement of hot stamping machine with robot arms and developed different working modes with parameters
- Simulated the working of real machines and visualized the whole working process simultaneously, and established the communication between virtual machine and control center by C#

Engineer Intern, Jiangsu Pacific Precision Forging Company, Jiangsu, China *Jun.2015-Jul.2015*

- Improved the manufacturing techniques of Volkswagen gears by optimizing parameters selection of temperature, time and pressure

LEADERSHIP EXPERIENCE

Vice Monitor, Huazhong University of Science and Technology, China *Sep.2013-Sep.2014*

- Built partnerships with other departments for networking events and facilitated class discussions focusing on academic development