

Fuyu Zou

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Work Experience

Machine Learning Engineer Intern

June ~ August 2018

BrainCo Inc.

Somerville, MA

- Down-sampled the large-scale EEG data with Map-Reduce programming model with Spark
- Developed real-time classifier for sleep stages based on recent econometrics research papers
- Implemented Neural Nets onto selected features and achieved state-of-art 93.1% high test accuracy
- Designed experiments to optimize model on new subjects, compiled the results into a presentation

Research Assistant

January 2018 ~ March 2018

Center of Gerontology and Healthcare Research

Providence, RI

- Developed hierarchical generalized linear model to predict re-admission rates for patients with CVD
- Checked the validity of the dataset and conducted exploratory data analysis based on research paper
- Utilized cross validation to optimize the model, and simulated interval estimates using bootstrap
- Summarized the final model and compiled research results into a presentation to other researchers

Data Analyst Intern

July 2016 ~ December 2016

PayPal Holdings, Inc.

Shanghai, China

- Collected, collated and carried out complex data analysis of in support of client managers' requests
 - Improved analysis efficiency by 60% by establishing models that classify clients on their characteristic
 - Minimized the time spent on monthly reports by synchronizing data in Excel and PowerPoint via VB
 - Reduced the client churn rate by 10% through analyzing the best advertise timing to retain clients
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Selected Projects

Prediction of Usefulness of the Yelp Reviews (NLP)

- Parsed restaurants information from Yelp Dataset and implemented relational database using SQL
- Preprocessed text and utilized GloVe and n-gram methods to convert text into word representations
- Built ensemble supervised learning models (bidirectional-LSTM, CNN) to predict the useful votes
- Achieved highest test AUC of 94.5% in classification and visualized key words in a useful review

Kaggle competition: New York City Taxi Trip Duration

- Implemented Elastic net, generalized additive model (GAN), and LGBM to predict taxi trip duration
 - Visualized the data in Plotly to do exploratory data analysis and potential spurious trips identification
 - Utilized K-Means clustering algorithm to analyze the frequency of pick-up and drop-off spots on map
 - Developed a LGBM based model that achieved 0.425 Root mean square logarithmic error on test dataset
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Education Background

Brown University - M.S. in Biostatistics

Providence, RI | GPA: 3.9/4.0

2017 ~ May 2019

- **Relevant courses:** Machine Learning, Deep Learning, Introduction to Algorithms, Numerical Optimization
- **Teaching Assistant:** Intro to Machine learning, Probability and Stats, Applied Regression Analysis

Shanghai University of Finance and Economics

Shanghai, China | GPA: 3.5/4.0

2013 ~ 2017

Skills

Programming: Python, SQL, R, SAS, Julia

Visualization: Tableau, Plotly

Machine Learning: Tensorflow, Keras, Scikit-learn

Data Infrastructure: Spark, Google Cloud Platform