Xiaoyu Liu

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Education

University of Wisconsin Madison — Madison, WI
Master of Science in Data Science — *Sep. 2020 – May 2022*

Hunan University — Changsha, China
Bachelor of Science in Statistics — *Sep. 2016 – June 2020*

Experience

Data Mining Intern — June 2020 – Aug. 2020
Saint Gobain — *Shanghai, China*

- Build data pipeline.
- Extract data through data mining and clawing methods from test results in Python.
- Integrate newly collected data with history data and store in Oracle automatically.
- Classify tested samples using unsupervised methods in R and Python.

Data Analyst Intern — Dec. 2019 – May 2020
Lufax — *Shanghai, China*

- Adjust the detecting model and tune parameters for abnormal detecting function.
- Visualize the abnormal change and standardize the output report in Python.
- Extract data from database using MySQL.
- Analyze data using retention analysis model and funnel analysis with MySQL and Tableau.

Projects

Recommendation System for Speed Dating | *Python* — Nov. 2020 – Dec. 2020

- https://github.com/XiaoyuLiu198/Speed-Dating
- Recommend potential participants that match certain conditions and share similar interest or background.
- Use target encoding to encode the categorical features.
- Tune parameters using grid search method.
- Cluster users using KNN model according to their interest and background.

IMDB Sentiment Analysis | *Python* — Oct. 2020 – Dec. 2020

- https://github.com/XiaoyuLiu198/IMDB-Classify
- Applied tokenization and deleted stopwords.
- Tune percentage of features included using grid search method.
- Build Naive Bayes model to classify the review.
- Test the result using classification metrics.

Test Answer Prediction(Kaggle top 17%) | *Python* — Dec. 2020 – Jan. 2021

- Create features on user-level and content-level.
- Transform and group tags using truncated SVD.
- Predict the probability of answering correctly using LightGBM.
- Predict the accuracy of answer in SAKT model and Saint model, which are neural network models specified in learning trace.
- Combine the prediction using bagging method.

Analysis of Distribution of Charging Piles(MCM Second Award) | *Python, R* — Jan. 2018 – May 2018

- Scrape traffic data and map data using API.
- Build regression model to predict the total number of charging piles.
- Solve the maximum coverage problem using genetic algorithm.
- Use Q-type clustering method based on level of development of the country, density of popularity, and other indexes.

Technical Skills

Languages: Python, SQL, R, Java
Developer Tools: Git, PyCharm
Libraries: pandas, NumPy, Matplotlib, sklearn, TensorFlow, dplyr, tidyverse