Zhufeng (Zephyr) Qiu

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EDUCATION

University of Southern California   Master of Science in Applied Data Science   Aug. 2019 - Mar. 2021
GPA: 3.83/4.0

Wuhan University   Bachelor of Science in Geographical Information Science   Sep. 2014 - Jun. 2018
GPA: 3.58/4.0   **WES GPA:** 3.64/4.0

TECHNICAL STRENGTH

Tools and Technologies: DBeaver, MobaXterm, SVN, JIRA, IntelliJ IDEA, Spark, Kafka, Elasticsearch, Firebase, AWS
Database management: Oracle, MySQL, PostgreSQL, MongoDB, Redis
Programming language: Java, Python, C++, Scala, C, C#
Main Coursework: Foundations of Data Management, Machine Learning for Data Science, Foundations and Applications of Data Mining, Advanced Mathematics, Linear Algebra, Discrete Mathematics, Probability Theory and Statistics

WORKING EXPERIENCE

NSFOCUS Wuhan, *Research and Development Engineer*   Wuhan, China
- Responsibility: process data and analyze the behaviors of users and entities.   Jun. 2021 – Present
- Utilized statistic and machine learning models to build the behavior baselines for users and entities, filtered out the abnormal users and entities and comparing them with the baselines.
- Responsible for a pilot project for China Telecom to provide early warning service
  - Connected original product logs to Kafka topic; preprocessed, normalized, and extracted these raw logs; stored filtered normalized data in Elasticsearch engine.
  - Designed the Anomaly Detection operator by implementing the LSTM-GRU algorithm to reduce computational effort and perform long time series correlation analysis

NSFOCUS Wuhan, *Research and Development Engineer (Intern)*   Wuhan, China
- Responsibility: classify and visualize product elements.   Jul. 2018 - Feb. 2019
- Conducted correlation analysis of abnormal behaviors, helping to detect potential attack threat in the alarm platform.

RESEARCH

Yelp restaurant review data recommendation system   Jun. - Aug. 2020
- Loaded and preprocessed the training set of more than 550,000 California restaurant reviews and the prediction sets of more than 50,000 reviews based on PySpark.
- Built content-based recommendation model (CB), item-based (IB-CF), and user-based (UB-CF) collaborative filtering recommendation model, respectively, to implement recommendation systems.
- Improved training efficiency by using Min-Hash and LSH algorithms to screen out effective user pairs for the UB-CF model, and established the evaluation metrics by utilizing TF-IDF and Pearson correlation coefficients.
- Achieved the 70% prediction accuracy rate for CB, 90% prediction accuracy rate for IB-CF, 50% prediction accuracy rate for UB-CF, and limited the training and predicting time to less than 600 seconds and 300 seconds, respectively.

PM 2.5 Inversion and Spatial-temporal Characteristics Analysis Based on Site and Satellite Data
Undergraduate Innovation and Entrepreneurship Training Program (UIETP)   Mar. 2016 - Dec. 2017
- Conducted correlation analysis of PM2.5 and other pollutants of Wuhan based on site and satellite monitoring data
- Associated ground sites data with satellite data to build a mixed effect model, verify the model's performance with cross-validation method, and compute PM2.5 spatio-temporal concentrations in Wuhan and surrounding areas.

EXTRACURRICULAR EXPERIENCE

Registered volunteer of "Be My Eyes"   Mar. 2022 – Present
- Helped blind individuals with everyday tasks through live video call

Class Monitor of Geographic Information Class IV, Wuhan University   Sep. 2014 – Jul. 2018
- Outstanding Student Leadership of Wuhan University 2014- 2015

Volunteer of "Sunshine Home"   Sep. – Dec. 2016
- Helped people with intellectual disabilities learn basic life skills and provide emotional companionship

Director of Theoretical Studies, Student Union of Resource and Environmental Sciences School, Wuhan University
- Outstanding Student Leadership of Wuhan University 2015- 2016   May 2015 – May 2016
- Hosted the first Poetry Recitation and Speech Contest of RES School as the organizer and chief mastermind