Zhiliang Mo

A machine learning scientist from China with 5 years industry experience. Keep on solving complex data problems with expertise on machine learning.

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Education

Zhejiang University, Geographic Information System, Master	2014.09 - 2017.03
Zhejiang University, Geographic Information System, Bachelor	2010.08 - 2014.06

Work Experience

Senior Data Scientist
Shopee 2021.10 - 2022.09

Map Geocoding Service: 2022.01-2022.09
- **Responsible for geocoding service**: online stability and accuracy improvement.
- **Retrieval improvement**: customised BM25 similarity, improved service accuracy by 1.0%.
- **Ranking improvement**: optimised ranking accuracy by training dataset, feature, rerank and post-processing, and improved service accuracy by 6%-8%.
- **Tools**: python, LightGBM, Elasticsearch, pyspark, CI/CD, Google Cloud Platform, Grafana, Docker

Machine Learning Scientist
Hikvision 2019.01 - 2021.08

Project of Classify Overload Status of Truck: 2020.11- 2021.06
- **Classified overload status**: trained models to classify the overload status of truck according to the GPS trajectory(AUC 0.96 and positive samples' PR 92%,70%).
- **Generated hot routes**: clustered the trucks' sub-trajectories.
- **Tools**: python, LightGBM, Map Matching, Java

Project of Digital Restoration: 2019.09-2020.06
- **Regenerated trajectory**: regenerated the trajectory of a person passing by multiple cameras.
- **Generated model of buildings**: generated the model of the building by IndoorGML standard.
- **Widely used**: product has been used in dozens of hotels and police stations.
- **Tools**: python, LightGBM, IndoorGML

Project of Trajectory Preprocessing: 2019.01-2019.08
- **Regenerated route of vehicles**: identified vehicle's route in road network according to its' GPS trajectory, precision 89%.
- **Applied on scaled database**: applied to road database up to millions of edges.
- **Tools**: Java, Hbase, Graph, Map Matching, Hidden Markov Chain, Viterbi Algorithm, A*, Spatial Index

Software Developer
Hikvision 2017.04 - 2018.12

Project of Tracking Trajectories Passing Multi-Cameras: 2018.09-2018.12
- **Reproduced trajectory**: reproduced trajectory of persons by tagged face&body images in surveiliance system.

Project of Video Big Data Application: 2017.04-2018.04

- **CI/CD**: Achieved the automated test of the application based on Jenkins.
- **Optimised performance**: gained 50% performance improvement after optimising.
- **Tools**: Java, Scala, Shell, Spark, HBase, Kafka, Elasticsearch, Zookeeper, Jenkins

Competition

Kaggle - Foursquare Location Matching   32/1079(top 3%)   2022.04 - 2022.07

- **Finished pipeline and accuracy improvements**: text pre-processing, distance & text retrieval, ranking model & classification model.
- **Retrieval**: text & distance retrieval based on Elasticsearch, max IOU: 0.9892.
- **Feature Engineering**: more than 400 features including distance features, text distance features, word2vec embedding, TF-IDF features, graph structure features and other features.
- **Ranking & classification**: trained ranking/classification models, IOU: 0.90985.
- **Tools**: python, Elasticsearch, LightGBM, Gensim, Word2vec, pytorch & pytorch-geometry

Others

Self Introduction:
- Keep reading domain-related papers and follow latest research progress.

Language Skill:
- CET 6(College English Test Band 6), fluent in reading and writing, intermediate in verbal.

Professional Skills:
- Fluent in python and its common libraries, basic java, scala & shell.
- Distributed big data components(e.g. Elasticsearch, pyspark, spark, hadoop & hbase).
- CI/CD tools(e.g. Jenkins, K8S & Docker).
- Linux, Git and so on.