ZHUOQUAN CHEN

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PROFILE

As a Data Scientist, I have an educational background in both Computer Science and Data Science. I am analytical, data-oriented, and calculated. I have an affinity for innovation and big-picture thinking, but I also enjoy digging into the details to solve complex problems.

PROJECTS

Customer Market Segmentation

This project will help customer departments use the model to learn unlabeled credit card consumption data to segment customer markets and gain more market share.

- Applied elbow Method to find the optimal number of cluster
- Apply unsupervised algorithms (K-Means) to perform market segmentation
- Trained autoencoders model in Keras
- Applied principal component analysis

Stocks Portfolio Analysis

This project achieved the calculation of stock portfolio return and risk, and obtains the optimal weight portfolio, so as to achieve the highest return.

- Portfolio return calculation in the price-weighted portfolio, equal-weighted portfolio, and value-weighted portfolio
- Portfolio correlation analysis such as correlation matrix, covariance matrix, and standard deviation
- Applied Markov Chain Monte Carlo (MCMC) Simulations
- Applied Sharpe Ratio to select the optimal portfolio

Games Classification

This project leveraged NLP to analyze text or comment content for achieving the classification of various games.

- Data scraping
- Applied CountVectorizer to tokenize contents and calculate the frequency of words
- Applied classification models with optimal hyperparameters
- Estimated the performance of models

Predicting House Prices

This project achieved the housing price forecast of the area of Ames, Iowa, and the importance of factors that lead to price volatility. Sellers can get the best price for the house based on these factors.

- Applied outliers detection and feature engineering
- Applied regression models with regularization
- Estimated the performance of models

TECHNICAL SKILLS

Data Pre-processing: data cleaning and data visualization, PCA, dimensionality reduction, feature engineering

Machine Learning: classification model, regression model, clustering, NLP, Time Series Analysis, Neural Networks. Statistical

Methods: Statistical Distributions, Bayesian Analysis, p-Values, Hypothesis Testing

Programming Languages: Python (Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn, Plotly), SQL, Java, C++

EDUCATION

General Assembly | Data Science Immersive Course *Sep-Dec 2020*

Brooklyn College | B.S. Bachelor of Science in Computer Science *Aug 2018-May 2020*

Borough of Manhattan Community College | A.S. Associate of Science in Computer Science *Aug 2016-May 2018*

EXTRACURRICULAR

Deep Learning Team *Sep 2019-Jan 2020*

Joined Professor Tang's Deep Learning team in Computer Vision in BMCC college.

CUNY Hackathon 2019 *Dec 2020*

My team's idea in this competition was that designed a wearable device (such as glasses and watch, etc.) with AI technique, which can help blind people get rid of blind stick in travel, and improving the life in the world.