ZHUOQUAN CHEN

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Portfolio: https://zhuoquan-chen.github.io/portfolio | GitHub: https://github.com/ZhuoquanChen/Data-Science-Projects

Data Scientist

With an educational background in both Computer Science and Data Science, I have an affinity for innovation and big-picture thinking, but I also enjoy digging into the details to solve complex problems. Passionate in applying data analysis, machine learning, and deep learning techniques to provide effective data science solutions.

EXPERIENCE

BMCC (Borough of Manhattan Community College) New York, NY *Oct 2018-present*

College Assistant (Financial Aid Department)

- Data entry and data tracking of student's FASSA (Free Application for Federal Student Aid)
- Applied data cleansing techniques to remove duplicate data for ensuring that students' names will not appear repeatedly on the calling list, as well as retain only useful data for archiving.

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
- Applied principal component analysis
- Trained autoencoders model in Keras
- Apply unsupervised algorithms (K-Means) to perform market segmentation

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 approaches of price-weighted, equal-weighted, and value-weighted
- 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

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.
- 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 techniques, which could help blind people get rid of blind stick in travel, and improving the life in the world.