ZHUOQUAN CHEN

718-300-0078 | Brooklyn, NY 11229 | zhuoquan1223@gmail.com

LinkedIn: https://www.linkedin.com/in/zhuoquanchen | Portfolio: https://zhuoquan-chen.github.io/portfolio | GitHub: https://github.com/ZhuoquanChen/Data-Science-Projects

EDUCATION

General Assembly — **New York, NY**
Data Science Immersive Course — *Dec 2020*

Brooklyn College — **New York, NY**
BS. Computer Science — *Aug 2018 – May 2020*

Borough of Manhattan Community College — **New York, NY**
AS. Computer Science — *Aug 2016 – May 2018*
CUNY Research Scholars Program Scholarship — *Aug 2017 – May 2018*

EXPERIENCE

Borough of Manhattan Community College — **New York, NY**
College Assistant, Financial Aid Department — *Oct 2017 – Present*
- Worked for data entry, and management of more than 100,000 financial aid applications each academic year.
- Used Python to clean and filter duplicate data and to ensure the names of students will not repeating appear on the calling list.

PROJECTS

Sentiment Analysis & Classification
Skills: NLP / CountVectorizer / Sampling / Naive Bayes / Logistic Regression / GridSearchCV / Confusing Matrix
Used NLP technology that can immediately judge a customer whether satisfy a product or not with their sentiment analysis. It can greatly reduce manual judgment, thus saving lots of time and money for enterprises.
- Visualized the phrases base on key judgment results.
- Naive Bayes Model with 91.7% accuracy for new data.
- Logistic Regression Model with 94.7% accuracy for new data.

Chest Disease Classification
Skills: Residual Neural Network / CNNs / Transfer Learning / Drop out / Data Visualization
Used transfer learning on the pre-trained ResNet (Residual Neural Network) model to automatically diagnose different types of chest diseases such as healthy, covid-19, bacterial pneumonia, and viral pneumonia through chest X-ray images.
- Model testing validation accuracy: 80% with 50 epochs.
- The model has weak performance at precision for covid-19 detection with 68% accuracy.
- The model has weak performance at precision for bacterial pneumonia with 55% accuracy.

Stock Portfolio Analysis
Skills: Covariance/ Normalization / Correlation Matrix / Data Visualization / Markov Chain Monte Carlo Simulation / Sharpe Ratio
This project calculated the optimal weights of the portfolio by analyzing the stocks of Apple, Amazon, Facebook, Google, and Tesla in the past two years, which could have a maximum return with the lowest risk.
- The optimal distribution of the weights in 10,000 simulations: Apple (0.3638), Amazon (0.3377), Facebook (0.0309), Google (0.0063), Tesla (0.2613).

SKILLS

Data 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 / Environment: Python (Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn, Plotly), SQL, Java, Jupyter Lab, Google Colab, PySpark.
Multilingual: Cantonese / Mandarin / English.
Others: Microsoft Office (Excel, Word, PowerPoint), Adobe (Photoshop, Illustrator).

ACTIVITIES

Deep Learning Team, BMCC — *Sep 2019,* **New York, NY**
Joined Professor Tang's Deep Learning team researching in CNNs including Neural Network, Softmax, SVM, Regularization, and Fully-connected Neural Network.

CUNY Hackathon 2019, BMCC — *Nov 2019,* **New York, NY**
My team's idea for this competition is to use CNNs to identify the distance and direction of nearby objects, so that blind people can know what is near them.