

ZHUOQUAN CHEN

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

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

ABOUT

With an education in both computer science and data science, I believe that every problem has a solution and many more than one. With a design background, I believe more in the power of imagination and creativity, because everything starts with imagination before it becomes reality. As a data scientist with a diverse background, I like to think from different perspectives and use data science methods and models to help people make more informed decisions.

EDUCATION

General Assembly | Data Science Immersive Course, New York City, NY Dec 2020
Brooklyn College | BS. Computer Science, Brooklyn, NY Aug 2018 – May 2020
Borough of Manhattan Community College | AS. Computer Science, Manhattan, NY Aug 2016 – May 2018
Borough of Manhattan Community College | CUNY Research Scholars Program Scholarship Aug 2017 – May 2018

SKILLS

Data Processing: Data Cleaning / Data Visualization / PCA / APIs / Dimensionality Reduction / Feature Engineering.
Machine Learning: Classification Model / Regression Model / Clustering / NLP / Time Series Analysis / Neural Networks / CNNs.
Methods: Statistical Distributions / Bayesian Analysis / p-Values / Hypothesis Testing / Markov Chain Monte Carlo / Data Modeling.
Programming Languages / Environment: Python / SQL / Java / Jupyter Lab / Google Colab / PySpark.
Software: Microsoft Office (Excel, Word, PowerPoint) / Adobe (Photoshop, Illustrator).
Multilingual: English / Cantonese / Mandarin.

PROJECTS

Sentiment Analysis & Classification

Skills: NLP / CountVectorizer / Sampling / Naive Bayes / Logistic Regression / GridSearchCV / Confusing Matrix

The main purpose of this project is to determine whether a customer is satisfied with a product of Amazon by analyzing their feedback.

- Visualized the phrases based 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

The purpose of this project is to use the ResNet model that is pre-trained on ImageNet to transfer learning by fine-tuning the model so that the model can fit new data. The new model can identify different types of chest disease by learning from 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 detection with 55% accuracy.

Stock Portfolio Analysis

Skills: Covariance / Normalization / Correlation Matrix / Data Visualization / Markov Chain Monte Carlo Simulation / Sharpe Ratio

The main purpose of this project is to get an optimal weight allocation with the lowest risk and the highest return by analyzing and calculating a stock portfolio.

- 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).

EXPERIENCE

BMCC

College Assistant, Financial Aid Department

Manhattan, NY

Oct 2017 – Present

- Worked for data entry of more than 100,000 financial aid applications data each academic year.
- Provided Financial Aid counselors with specific data on the students they need.
- Used Python to clean and filter duplicate data and ensure students' names will not repeat to appear on the calling list.

ACTIVITIES

Deep Learning Team, BMCC, Manhattan, NY

Sep 2019 – Jan 2020

Joined Professor Tang's Deep Learning team researching in CNNs including Neural Network, Softmax, SVM, Regularization, and Fully-connected Neural Network.

CUNY Hackathon 2019, Baruch, Manhattan, NY

Nov 2019

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.