ZHUOQUAN CHEN Data Scientist

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

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 graphic 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.

TECHNICAL 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: Python (Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn, Plotly), SQL, Java

EXPERIENCE

BMCC (Borough of Manhattan Community College), New York, NY *Oct 2017-Present*

College Assistant (Financial Aid Department)

- Worked for data entry, tracking, 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.

General Assembly Fellow, New York, NY *Sep 2020-Dec 2020*

General Assembly Apprenticeship

12-week full-time immersive educational program strengthening Data Science skills including Python, SQL, data cleaning, data visualization, regression models, classification models, web-scraping, APIs, NLP, advanced supervised learning, unsupervised learning, time series analysis, and statistics.

Projects

Chest Disease Classification

This project 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 training validation accuracy: 93.27% (50 epochs)
- Model testing validation accuracy: 80% (50 epochs)
- Model had weak performance at metric of precision for type 1 (covid-19) and recall for type 2 (bacterial pneumonia) respectively with 64% and 50% accuracy

Future Sales Forecasting

This project leverages time series to analyze and develop a predictive model, which is able to forecast the sales of 1000 groceries in the future based on 2 years of historical data.

- Some outliers and spare features may affect the statistics such as the values of mean and percentiles
- Applied time series forecasting model: Facebook Prophet time series model
- Predicted future product sales for each grocery by the different period of time while considering the effects of seasonality, holidays, promotions

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 | BMCC** *Sep 2019-Jan 2020*
  Joined Professor Tang's Deep Learning team in Computer Vision at BMCC college.
- **CUNY Hackathon 2019 | Baruch College** *Dec 2020*
  My team's idea in this competition was that created a wearable device (e.g. glasses and watch, etc.) with AI techniques, which could help blind people get rid of blind stick in travel.