ZHUOQUAN CHEN

DATA SCIENCE & MACHINE LEARNING

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EDUCATION

- General Assembly | Data Science Immersive Course, Manhattan, NY — Dec 2020
- Brooklyn College | BS. Computer Science, Brooklyn, NY — Aug 2018 – May 2020
- Borough of Manhattan Community College | 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 / 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.

PROJECTS

SENTIMENT ANALYSIS & CLASSIFICATION

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

The purpose of this project is to determine whether a customer is satisfied or not with a product of Amazon by analyzing their feedback.

- Naive Bayes Model with 91.7% accuracy for new data, and with 89% accuracy for detecting people who are not satisfied.
- Logistic Regression Model with 94.7% accuracy for new data, and with 89% accuracy for detecting people who are not satisfied.

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 & bacterial pneumonia symptoms with 68% & 55% accuracy.

STOCK PORTFOLIO ANALYSIS

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

The purpose of this project is to gain an optimal weight distribution with the lowest risk and the highest return by analyzing a stock portfolio.

- The optimal 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.

Deep Blue Advertising Co., Ltd., | Design Director, Guangzhou, China — Oct 2011 – Sep 2014

- Completed 30+ branches of China Southern Power Grid reshape VI visual system in Guangzhou.
- Won the design bid for the first multi-function exhibition hall project of Guangzhou Power Supply Bureau.
- Won the design bid for the P&G Annual Convention of 2014, Guangzhou, China.

ACTIVITIES

- Deep Learning Team | BMCC, Manhattan, NY — Sep 2019 – Jan 2020
- CUNY Hackathon 2019 | Baruch, Manhattan, NY — Nov 2019