

Skills

- **Python (Tensorflow, Scikit-learn)** Data Cleansing, Data Scraping, Visualization, Machine Learning, NLP, etc.
- **R** Regression Analysis, Causality Analysis, Time Series Forecasting, Machine Learning.
- **SQL** Data query and database design.
- **Tableau, PowerBI** Visualization development.
- **Java** Data structure & algorithms optimization, software development.
- **Git** Git bash/Git GUI tools.
- **JavaScript, HTML, CSS.**

Education

Bachelor of Science - Business Analytics / School of Computing, National University of Singapore Aug 2016 – June 2020

- CAP: 4.18/5.0
- Relevant coursework: Machine Learning, Web-Application System Development, Data Management and Visualization, Regression Analysis, Causality Analysis, Linear Programming, Search Engine Optimization, Risk Analytics for Financial Market, Mining Web Data with NLP techniques, etc.

Working Experience

Data Analyst Intern / GIC Ltd. Dec 2018 – July 2019

- Implemented and deployed an application that forecasts the mid-term returns of asset classes held by the company to guide the portfolio management process.
- Optimized the coefficients of a mean reversion forecasting model by the Genetic Algorithm. The forecasts were improved with an obvious decrease in the sum of squared error.
- Design and Developed storyboards to visualize the projected returns of models or other data of interest.

Data Analyst Intern / PropertyGuru May 2018 – Aug 2018

- Built geographical maps in tableau to graphically visualize the average property prices by districts of Singapore.
- Generated assessment scores for houses by integrating the transportation, entertainment, and other information from external API and data sources to help consumers better understand the level of attractiveness for every house.
- Updated and developed the dashboard in Tableau and Power BI to analyze the user behaviors and listings' performance to better match user demand to agents' recommendations.

Research Assistant / National University of Singapore May 2017 – June 2017

- Collected data from large number of websites using Scrapy, Selenium, Urllib, and other python libraries.
- Maintained and interacted with SQL databases.
- Transformed and cleaned data into the ready-to-use format for further research.

Teaching Assistant / National University of Singapore Aug 2017 – May 2018

- Facilitated tutorial sessions of 9 and 12 out of 200+ students in two semesters for *CS1010S: Programming Methodology (Python)*. Annotated and marked assignments to guide students into good coding habits.

Relevant Projects

Stock Value Prediction Project Jan 2019 – May 2019

- Adopted RNN with LSTM to predict a portfolio's prices and achieved a Sharpe Ratio of 2.23 in a period of 4 months.
- Modified the MSE loss function by penalizing the wrong predicted price movement. The accuracy of both training and validation data set increased hugely.

Flask Web App Development (School Capstone Project) Aug 2018 – Dec 2018

- Built a data de-identification application for SingHealth to de-identify the privacy data for patients. Designed functions using regular expressions to automatically identify the privacy data field and choose the corresponding de-identification methods.
- Implemented the Grid Search function to search for the optimal combination of degrees of the de-identification methods. It enabled the application to minimize the information loss while achieved the K-anonymity requirement.
- Implemented early-termination and memorization features for the grid search function to optimize the time cost.

Web Application Development Jan 2018 – May 2018

- Developed a web-application using ReactJS framework, focusing on the visualization of student's progress in modules using to help students and module instructors better manage the course information.
- Built an API gateway using AWS Lambda to refresh the data stored in Firebase, thus enabled the users to refresh the dashboard in seconds.