MICHAEL VANDERVELDEN

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SKILLS

Technical Skills: Advanced SQL (Microsoft SQL Server, MySQL, PostgreSQL), Tableau, Microsoft Office Suite (Excel, Word, Powerpoint), Python, MATLAB, R, Git

EDUCATION

Simon Fraser University   2019 - 2023
Bachelor of Science, Computer Science

PROJECTS

Web Scraping Real Estate Data

- Wrote Python script utilizing the Pandas library to scrape and clean real-world New York City real estate data from Zillow.

- Built a linear model in Python to calculate the expected price of over 1300 real estate properties, finding that 166 properties (12.7%) were undervalued.

- Using the model, discovered opportunities to save an average of 30% and a maximum of 164% on the sale price of an undervalued property.

Machine Learning Model to Predict Stock Performance

- Conducted time series analysis and forecasting of the price of ETF securities using Python.

- Performed exploratory data analysis in Python; generated data visualizations of the closing price of several different ETF's using the matplotlib library to determine which stock to analyze.

- Implemented a random forest model to determine which days to purchase stock: Used Halving Grid Search from the Sci-Kit Learn library to tune hyperparameters for an optimal predictive model, final model performed with 82% accuracy on the test data.

- Determined most useful indicators for predicting stock performance using Feature Importance. Discovered that among 25 features used for classification, Modified Fixed Variable (MFV) rate and On Balance Volume (OBV) accounted for 12.8% and 7.9% of predictive usefulness, respectively.

Pharmaceutical Drug Sales Dashboard

- Cleaned and queried sales data from 2014-2019 for several pharmaceutical drugs using SQL and Microsoft SQL Server.

- Created clear, concise, and interactive dashboard using Tableau; used visualizations to identify useful trends and insights, such as best-performing pharmaceutical, and which months saw the highest revenue.

EXPERIENCE

Kin's Farm Market   February, 2018 - February, 2022
Stockperson

- Conducted regular audits of product shelf placement based on sales data, enhancing product visibility and driving sales growth.

Halo Sawmill Manufacturing   February, 2022 - present
Maintenance Worker