

# ABASS IBRAHIM

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## Data Scientist

Experienced Data Scientist with a degree in Accounting & Finance and a keen interest in Entrepreneurship & Capital Markets. Skilled at utilizing data acquisition, modeling, and statistical analysis, to create customer-facing dashboards, applications and machine learning models that assist companies with product development, market research, design and analysis. Passionate about collaborating with teams to help build and grow innovative companies, products and solutions.

## TECHNICAL SKILLS

**Python:** NumPy, Pandas, Scikit-Learn, TensorFlow, NLTK, Optuna, OpenAI Gym, Stable Baselines3, SARIMAX, Facebook Prophet

**Other:** SQL, Tableau, HTML, CSS, JavaScript, Git, Adobe XD, Sketch, Adobe Premiere Pro, Adobe After Effects

## TECHNICAL PROJECTS

### Stock Portfolio Optimization - [GitHub](#)

Assembled a comprehensive web app to aid investors in optimizing their portfolio of stocks to maximize returns through Reinforcement Learning

- Acquired 10 years worth of historical stock price data of the Dow Jones Industrial Index via the yahoo Finance API
- Trained **reinforcement learning** algorithms(**A2C**, **PPO**, **DDPG**, **SAC**) using python's **OpenAI Gym**, **stablebaselines 3** and **finrl** libraries
- Yielded a **2%** increase in ROI compared to the market when backtested by optimizing models using technical indicators
- Conducted **sentiment analysis** on tweets regarding stock performance of publicly traded companies by analyzing around 6,000 tweets
- Utilized **NLTK** and **Word2Vec** to obtain an **accuracy score** of 0.75 using **Boosting** models

### US Time Series Prediction - [GitHub](#)

Analyzed over 14,000 zip codes from Zillow's Housing data to determine which was best to invest in through predictive modeling on ROI

- Predicted house prices in Nevada using **SARIMA**, **Facebook Prophet** and **Neural Network** architectures (**LSTM**, **GRU**, **CNN**)
- Web-scraped additional exogenous micro and macro-economic features for feature engineering
- Attained a **MAPE** (mean absolute percentage error) of 0.035 through the use of a single layer **Convolutional Neural Network**
- Visualized the data and findings using **tableau** to create an interactive [dashboard](#)

### H1N1 Vaccination Predictor - [GitHub](#)

Deployed a web app used to aid Public Health agencies in predicting the vaccination status of an individual

- Constructed a pipeline using classification models on over 26,000 responses from the US National Flu Survey from 2009
- Tuned **Tree**, **Logistic Regression** & **Boosting** models using **Optuna** to achieve an **AUC** of 0.87 and **Accuracy** of 78%
- Deployed a **Streamlit** [web app](#) to predict the vaccination status of new entries and visualize the results

### House Price Predictor - [GitHub](#)

Created a house price predictor for a Real Estate Agency based on various features of the houses based in King County

- Performed inferential and predictive modeling on over 21,000 houses through training multiple **linear regression** models
- Achieved an **R squared** of 0.85 through enhanced feature engineering by web scraping for more data
- Created a [house price predictor](#) using python's Flask library

## EMPLOYMENT HISTORY

Founder/Head of Product Design and Data Analytics, **Tastr Limited**, London, United Kingdom

06/2019 - Present

- Developed a Data Driven Web App utilizing ML and image recognition to enable users to share recipes and information about cooking and food related topics.
- Led a team of 3 including CFO and CPO through the process of crafting the product strategy, including designing and identifying the key features of the app and developing the product from concept to launch
- Performed market research, industry analysis, target market and competitive analysis to determine a go-to-market strategy
- Utilized Adobe XD and Sketch to create and redesign the UI/UX of over 250 individual pages of the mobile and desktop applications
- Generated leads for potential users by implementing Digital marketing and cold emailing on social media to procure 10% of beta testers in the cooking space from a list of 200 willing candidates

Trust and Wealth Services Intern, **Rawlinson & Hunter**, Leatherhead, United Kingdom

09/ 2017 - 09/2018

- Responsible for gathering, analyzing and preparing data used in Investment Management Reports for high-net worth clients
- Utilized Microsoft Excel and internal software (Trust Accounts) to evaluate client investment data, analyze transaction data and ensure accuracy for bookkeeping purposes
- Streamlined the task of reconciling client investment valuations utilizing index matching and PDF to CSV conversion, resulting in an increase of efficiency and reducing the total time taken from 4 hours to 30 minutes

## EDUCATION

**Flatiron School**, New York, NY

11/ 2021 - 03/2022

Immersive Data Science Bootcamp Program

**Durham University**, Durham, United Kingdom

Accounting & Finance Degree - 2:1

06/ 2019