David Moraes

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Recent LSE graduate with a quantitative background, seeking graduate entry roles in the Technology Industry. I enjoy discovering data-driven relationships to solve business problems.

VIRTUAL INTERNSHIPS | FORAGE

Data Scientist Job Simulation
Lloyds Bank Group

09/2024 – 10/2024

Tasks

- Developed a predictive model for **customer churn** using random forest among other ML models, achieving an ROC-AUC score of 0.82
- Performed **data pre-processing**, including handling missing values, encoding categorical variables and feature scaling.
- **Reported** on assumptions, limitations and retention strategies for at-risk customers.

Data Scientist Job Simulation
British Airways

09/2024 – 10/2024

Tasks

- **Web-scraped** and analysed customer review data to uncover sentiment, complaints and preferences.
- Built a predictive model for **customer acquisition** using a random forest classifier, achieving an accuracy of 0.85
- **Reported** on factors that strongly influence customer acquisition and how to leverage them to increase sales.

Data Scientist Job Simulation
Quantum

09/2024 – 10/2024

Tasks

- Used R to analyze **customer lifecycle stages**, isolating high-value segments and identifying purchasing patterns for targeted marketing.
- Scaled sales data to **normalize control and trial store comparisons**, uncovering up to 25% higher sales volumes in trial stores compared to control.
- Designed **uplift test framework** by selecting control stores based on correlation with trial stores, ensuring accurate performance comparison.

Quantitative Analyst Job Simulation
JP Morgan Chase & Co

09/2024 – 10/2024

Tasks

- Created a prototype **pricing model** that can go through further validation and testing before being put into production.
- Built a model using Python that will estimate the **probability of default** for a borrower.
- Deployed Python code to **segment customers** according to FICO scores to narrow in on the probability of default.

SKILLS

Software: Python, R, SQL, Tableau, Excel, Powerpoint

EDUCATION

BSC (HONS) ACTUARIAL SCIENCE
London School of Economics and Political Science

09/2021 – 06/2024
London, UK

INTERNATIONAL A-LEVELS
St Christophers School

05/2019 – 05/2021
Isa Town, Bahrain

Courses

- Mathematics (A*), Physics (A*), Further Mathematics (A), Economics (A)

AWARD & PROJECTS

1ST PLACE IN THE INTER-AMERICAN DEVELOPMENT BANK (IDB) CHALLENGE (02/2024)

- Wrote a **python script** to collect, clean and pre-process stock data on Latin american companies.
- Used **AIC, Ridge, and Lasso regression** to find key factors affecting stock return correlations.
- Calculated **stock return correlations** between individual companies, sectors and countries to feed into IDB's new credit model.

Financial Reporting - Bike Sales Dashboard (05/2023)

- Created a dynamic dashboard for management to assist in **visualising** bike sales by store location.
- Used **pivot tables and charts** to visually represent trends in data such as sales, cost and profit, footfall and hit rate.
- **Segmented customers** by demographic and geographic data to find patterns in behaviour and identify key target markets.

SQL/Tableau: Covid-19 Effects Dashboard (06/2023)

- Used **joins**, **CTEs**, **temp tables**, and **data type conversions** to explore infection, death and vaccination data.
- Applied **window functions** and aggregate functions to calculate death & infection % and rolling counts of vaccinations.
- Developed a **view** to simplify data access and integrated with **Tableau**, creating a dashboard.

Python/MongoDB: Hospital Finances Database (01/2024)

- Built a **database** to store financial and personnel data on a simulated hospital using MongoDB.
- Wrote **MongoDB queries** to answer situational questions about finances, personnel and inventory.
- Made an **aggregation pipeline** to calculate total revenue by patient, procedure types and doctors.