JACK **PIERCE**

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PORTFOLIO

 https://jackpierce11.github.io/

 www.kaggle.com/jackpierce

PROFILE

I am a motivated and enthusiastic individual with a passion for learning and an inquisitive, analytical mindset. I enjoy tackling complex problems and have developed independence, problem-solving skills, and cultural awareness through my experiences living and travelling abroad.

EDUCATION

2.1 MASTERS PHYSICS WITH PHILOSOPHY 2016-2020
The University of Manchester

Masters Physics Project - Research and experimental project on magnetic nanobots

Relevant courses - Mathematics 1 & 2, Vibrations and Waves, Statistical Mechanics, Mathematics of Waves and Fields, Introduction to Non-Linear Physics, Philosophy of Language

PROJECTS

SENTIMENT ANALYSIS- WOMEN'S CLOTHING REVIEWS

- Created a Word2Vec language model based on 23,486 customer reviews for women's clothing and trained LSTM neural networks to predict 5-star ratings.
- Developed three models using Keras with varying architectures, and achieved the highest accuracy score of 0.702 with Model 2.
- Suggested focusing on why customers leave positive text reviews without giving a 5-star rating to improve customer experience.

PREDICTING HOUSE PRICE VALUE

- Carried out EDA, data cleaning and feature engineering and selection on a dataset of 2919 houses with 80 features. Scored RMSE of 0.13205 comparing the log of prediction and actual values. Placed in top 25% Kaggle competition.
- Trained various regression models (Ridge, Lasso, XGBoost and Random Forest Regressor) and combined their predictions to mitigate overfitting.

PREDICTING PREMIER LEAGUE MATCH WINNERS

- Conducted data preprocessing, feature engineering, and selection on a dataset of 1389 football matches, with 27 features.
- Implemented various ML models, including K-nearest neighbour, logistic regression and a random forest classifier and achieved an accuracy of 73%.

SKILLS

- Python (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, Keras)
- Microsoft Office (Word, Excel, PowerPoint)
- Matlab (used in Physics projects)
- Data Visualisation
- SQL (familiar)

EXPERIENCES ABROAD

- After graduating, saved up money for 18 months while self-studying Spanish before living and travelling in Mexico and Brazil for 11 months
- Became advanced in Spanish (C1) and learned Portuguese to a high level (B2) while teaching over 500 lessons of English online to fund travels
- Volunteered in a hostel for two months

PREVIOUS EMPLOYMENT

BAR SUPERVISOR (LUXURY EVENTS)

Thames Luxury Charters LTD

June 2016 - Dec 2021, Dec 2022-present

- Communicating with client event organisers and supervising up to 5 bartenders
- Trained over 15 new staff, and managed logistics of bar stock using Excel

LANGUAGES

SPANISH (ADVANCED) - C1

PORTUGUESE (FLUENT) - B2