

Jack McNish

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Education

MEng. Civil Engineering , Imperial College London Predicted Grade: Upper Second Class (2:1) Relevant Modules: Computational Engineering Analysis, Operations and Systems Analysis, Mathematics, Statistics Final Year Project: Applications of Deep / Reinforcement Learning for Space-Based Solar Power	2019 - 2023
French Baccalaureate , Lycée Français Charles de Gaulle de Londres Grade: High Honors ("mention très bien") [17.87/20] in scientific stream	2010 - 2019

Experience

Google Summer of Code Contributor , ML4Sci — Remote • Completed project on finding exoplanets with astronomical observations using lightcurves. • Implemented time-series data processing using numpy, pandas, and rapids for outlier removal, normalization, stitching and imputation on terabytes of data. • Applied time-series classification algorithms (Time Series Transformer, XceptionTime, Rocket) using 'tsai' library, achieving best accuracy of 75-80%. • Published processed datasets and detailed workflow as open-source project using github gist and Medium	Summer 2022
Project Management Intern , Amazon — London, UK • Collaborated with hiring teams to analyse and improve EMEA and APJC recruitment pipelines and cycle times • Worked with data analytics and reporting team to rectify datasets (erroneous dates, wrong cycle times, incorrect categories...) • Estimated impact of processes and interventions with statistical analyses and data visualizations with pandas & matplotlib • Cycle time reductions evaluated to be 35% in certain scenarios as well as increased robustness in recruiting team structures • Presented areas of improvement and recommendations (strategic, process-specific, and data-specific) to senior leadership	Summer 2022
Operations and Logistics Intern , Amazon — Mansfield, UK • Liaised with robotics, data analytics, and operations teams to identify process inefficiencies and design, test, and implement improvements of fulfillment centre processes, focusing on optimal use of Kiva robotic storage. Implemented new process workflow • Analysed billion-row datasets with SQL Redshift and Python, to identify areas of improvement, and quantify impact of proposed interventions; invented new metric to monitor associate performance and process health. • Estimated cost savings of £148,000 per year per fulfillment centre, presented project to senior management, later deployed at UK and EU-wide level.	Summer 2021
University Advisor for the Young Engineer Program , InvestIN Education — London, UK • Worked in a team with other university advisors to help students understand engineering topics, giving tangible examples of theoretical principles; participated in panel Q&As about improving university applications. • Guided students' discussions during creative problem-solving / engineering design challenges	2020 - 2022

Activities

Operations Engineer at Karman Space Program — [Imperial College London] Part of the UK's most-funded student-led space program, with the goal of being the first to design a reusable rocket to pass the Karman Line. Liaised with international and UK-based spaceports and organized launch activities; implemented launch commit criteria checks using Python and MET Office weather API and Django	2021 - 2022
Machine Learning College: Programme Tester at G-Research / Cambridge Spark Tested and offered improvements on the machine learning curriculum studied by quantitative researchers at G-Research.	2021

Projects

Runner-up at AIHACK21 — Artificial Intelligence Hackathon Collaborated in a team of 4 to implement machine learning algorithms for regression on the Boston Housing dataset; detected and corrected errors in the dataset and conducted spatial analysis, best performance with a random forest. Placed 2nd out of 30 teams.	2021
The Wall Street Quants (Scholarship) — Quantitative Analyst Course Obtained scholarship to selective course, topics include: backtesting, portfolio optimization and algorithmic trading strategies on cryptocurrencies	
Finalyzer — FinTech Web Application Developed a web application using Python to improve trading habits of retail traders. Users input their trades (date and price) and are returned information such as their risk appetite, returns vs benchmarks including a proprietary metric to 'score' trades. Awarded AWS Proof of Concept Funding - Currently built using Streamlit but in the process of converting to Django; stock data is retrieved via yfinance / IEX Cloud APIs.	2020 - 2022

Skills

Code: Python, C++, Matlab, HTML5, CSS3, Django, SQL
Microsoft Office Suite (Microsoft Learn Student Ambassador)
Languages: English (native). French (native). Russian (B2)