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Lucas Curtin, MSci

Data Scientist

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I'm currently a data scientist at Kantar with an MSci in Physics from UCL, with a specialisation in quantum machine learning for high energy physics. Proficient in Python, Data Analysis, and Machine Learning. Winner of the Polkadot x EasyA and Tezos x EasyA blockchain hackathons earning cash-prizes over £10,000. Led a team at UCL, earning over 90% for a paper on sustainable mobility in the maritime industry. Completed projects on both a computer vision neural network study on jet tagging and utilising a FPGA for a muon lifetime study. In my free time I am learning C++ and developing a game with open source software: Godot.

Skills

Tools and Languages	Python, Keras, Tensorflow, Qiskit, Git, Excel, Pandas, PyTorch, Scraping, Meta Prophet
Quantitative Research	Machine Learning, Graph Neural Networks, Quantum Computing, Computer Vision

Experience

Kantar **July 2023 — Current**

Data Scientist

- Analyzed and processed viewing statements from a diverse range of sources to gain insights into viewer behavior and preferences for the international TV markets.
- Created predictive models and algorithms to identify trends and patterns in viewer behavior, enabling the optimization of content recommendations and scheduling.
- Designed and maintained data pipelines for efficient data retrieval, transformation, and storage, ensuring the availability of up-to-date data for analytical purposes.

Amazon **July 2022 — October 2022**

Operations and Logistics Associate

- Worked at Amazon's East London branch, gaining valuable experience in writing reliable code and improving existing data projects.
- Independently conceived and executed a project to optimise a complex 24-hour delivery cycle, ensuring on-time deliveries to customers.
- Developed and implemented a sophisticated scraping algorithm to automate the handling of problem packages within the logistics process. This innovative solution significantly reduced manual intervention, improved package routing accuracy, and enhanced overall operational efficiency.

Education

Physics MSci **2019 — 2023**

University College London

- Achieved a 2:1 in the degree with a first in my final year delivering my thesis on A 'Quantum Computing Approach To Particle Track Reconstruction'.
- Implemented a new quantum circuit architecture, a layer variational quantum eigensolver, for edge classification within a quantum graph neural network.
- Investigated the effect of data leakage in normalisation in Jet Tagging with a CNN.
- Achieved first class marks in particle physics, advanced quantum theory, and quantum computation and communication.

A Levels **2014 — 2019**

University College School

- Studied Maths, Physics, Further Maths, and History.
- Delivered a talk on the Kapitsa–Dirac effect for a local Academic Symposium.
- Invited to the Cambridge University Immerse Programme to study physics and delivered a speech about P-N junctions.

Activities

- Winner of the Tezos X EasyA Hackathon, working with dynamic art and NFT minting on Tezos to increase gallery footfall. 2022
- Developed complex web scraper macros with Selenium to automate large scale work processes. 2022
- Winner of the Polkadot X EasyA Hackathon, working with project specific blockchains to streamline the insurance industry. 2022
- Led a project investigating the benefits of marine scrubbers for the growing maritime industry. 2022
- Designed a convolutional neural network to discriminate between W-boson and Q.C.D jets images from CERN. 2021
- Quantitatively investigated the effects of data leakage when preparing data sets for machine learning tasks. 2021
- Participant of AI Hack 2020 at Imperial College London, gaining experience working with large data sets. 2020