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Lucas Curtin, MSci

Data Scientist

Github: boboboon
Website: boboboon

I'm currently an MPhil student in Data Intensive Science at the University of Cambridge, with a focus on research computing, advanced statistics, high-performance computing, and deep learning. Alongside to this, I am working as a Data Scientist at Kantar and hold an MSci in Physics from UCL, specializing in quantum machine learning for high energy physics. I am proficient in Python, Data Analysis, and Machine Learning. I have also won the Polkadot x EasyA and Tezos x EasyA blockchain hackathons, earning cash prizes of over £10,000. My previous projects include deploying a quantum graph neural network on CERN data for particle track reconstruction and I am now currently learning to develop C++ packages for particle physics problems.

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 — Present**

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

MPhil in Data Intensive Science **Oct 2024 — Present**

University of Cambridge

- Currently pursuing an MPhil with a focus on data science for scientific research, covering research computing, machine learning, high performance computing, and deep learning.
- Engaged in comprehensive coursework including Statistical Methods, Advanced Statistical Methods, and Machine Learning, which encompass both frequentist and Bayesian statistics, optimization algorithms, and neural networks.
- Gaining proficiency in scientific programming with Python and C++ for research computing, including best practices in code development, version control, and deployment on HPC environments.
- Developing hands-on skills in data analysis techniques, including Bayesian inference, Monte Carlo methods, Gaussian mixture models, and deep learning applications in scientific datasets.

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 normalization in Jet Tagging with a CNN.
- Achieved first class marks in particle physics, advanced quantum theory, and quantum computation and communication.

Hackathons

- Winner of the Tezos X EasyA Hackathon, working with dynamic art and NFT minting on Tezos to increase gallery footfall. 2022
- Winner of the Polkadot X EasyA Hackathon, working with project specific blockchains to streamline the insurance industry. 2022