

Aidan Holmes

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EDUCATION

Imperial College London

London, England

Master of Science in Artificial Intelligence

Expected Sept 9th, 2024

- **Grade:** Distinction Average (In progress)
- **Honours:** Imperial/MiT AI Hackathon Innovation Prize Winner. No 10. Downing Street AI Hackathon Semi-Finalist.
- **Key Modules:** Computational Finance, Reinforcement Learning, Natural Language Processing, Deep Learning, Machine Learning, Graph Based Learning, Symbolic AI, Software Engineering for ML systems, Computer Vision.

The University of Edinburgh

Edinburgh, Scotland

Bachelor of Science in Physics

Sept 2019 - July 2023

- **Class:** First Class Honours
- **Honours:** Academic Certificate of Merit for Outstanding Performance
- **Key Modules:** Computer Simulation, Thermodynamics, Quantum Mechanics, Electromagnetism, Linear Algebra, Vector/Several Variable Calculus, Mathematical Programming, Economics, Statistical Modelling, E+M Engineering.

WORK EXPERIENCE

Mind Storms

London, England

Software Development and ML Engineer, Summer Contract

Mar 2024 – July 2024

- Led a team of 4 through the software engineering development of a thought-to-speech brain-computer interface product.
- Utilized machine learning methods to process EEG recorded brainwave data. Responses displayed on React web-app interface and synthesized with text-to-speech models.
- Accepted into the Angel Partners VC investment platform with a valuation of £5 million after 5 months of product development, with the company pitch presentation being recorded by myself.

Queen's Tower Capital

London, England

Junior Analyst, Student Systematic Trading, Portfolio Optimization

Sept 2023 – May 2024

- Participated in the student-run investment society at Imperial College London, working under industry professional
- Gained experience in performing investment and financial analytics, both through research and python/sql based tooling methods.
- Conducted research into various equities and optimization strategies, culminating in a final report presentation.

SSE Energy Solutions

Perth, Scotland

Data Science Intern, Commercial Markets

June 2023 – Sept 2023

- Developed ML(Python) and Excel methods to quantify and visualize customer engagement with energy data.
- Redesigned the data science recruitment process to be more streamlined while still accurately gauging an applicant's ability with ML methods, Excel, and SQL.
- Assisted development in the modelling of customer churn, financial predictions, and energy usage.

Barclays UK

Glasgow, Scotland

Summer Intern, Barclays Investment Bank, Global Change

June 2022 - Aug 2022

- Worked on analyzing monthly trade failures to identify common break reasons and weaknesses within certain departments. Also consolidated the list of break reasons such that future employees can more easily identify problems. Achieved through a mix of Python/SQL and Excel based approaches.
- Worked with other banks such as Citi and Credit Suisse to process trades. At times led the meetings as the Barclays representative.
- Proposed environmental innovation projects, such as using table booking data to turn AC/heating on/off to save energy, as part of Barclay's green initiatives.

Teres Global

Zurich, Switzerland

Summer Quant Developer Intern

May 2020 - June 2020

- Led a team of other interns to conduct detailed research into investment suitability for 300+ European companies.
- Built data pipelines to assist my teams research efforts.
- Automated large aspects of the research tasks using Visual Basic/Python scripts to massively cut down the time taken by a factor of 15x faster than expected.

SAMPLE PROJECTS WORKED

Imperial/MiT AI Hackathon: The Pin Factory. (Python [PyTorch]/React)

- Used natural language and prompt tuned GPT4 controller model to call other specialized models to perform specific tasks such as churn modelling. Use cases involved allowing non-technical people to do technical work without requiring technical knowledge.

Team Leader, Kew Gardens Millenium Seedbank Partnership for Seed Viability using X-Ray Imaging. (Python [PyTorch]/React/AWS)

- Led a team of seven students in the design and implementation of a web app for Kew Gardens that will allow researchers to massively reduce the time needed to segment and assess seed x-ray images. Use case being improved quality of stored seeds in the seedbank.

No. 10 Downing Street AI Hackathon: JarGone (Python [Anthropic API/HuggingFace])

- Used Anthropic's API to utilize Claude Opus for the summarization of government legislation and creation of explanatory notes for varying levels of background. Fine-tuned language translation models from HuggingFace were used to translate the explanatory notes to different languages.

SKILLS, ACTIVITIES & INTERESTS

Technical Skills: Python (Expert, including TensorFlow/Sklearn/PyTorch/Jax/Pandas/Numpy/LLM), SQL (Basic), C++ (Basic), React JS (Basic), Kubernetes, Git, Docker, CI/CD, High Performance Computing.

Activities: Intramural Football, Imperial Investment Soc, Imperial Data Science Soc, Powerlifting.

Misc Awards: 3x Scottish Math Challenge gold medal, Youth Philanthropy Initiative winner. Final year UCAS points: 276.

Secondary Employment: Primark (Retail Assistant), Tim Hortons (Team Member), Physics/Math/CS Tutor.