

Hamish Child

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As a dedicated software engineer with 4 years of experience, I've honed my skills in developing data-driven and AI-powered features for the education sector. I've successfully collaborated with cross-functional teams to deliver impactful solutions, leveraging technologies like Python, PHP, and large language models from OpenAI, Anthropic and others. My ability to independently lead projects and excel within a team has allowed me to drive innovation and achieve significant results. I'm passionate about leveraging technology to create impactful features for customers and am eager to contribute to cutting-edge projects.

EDUCATION

Lancaster University

MPhys Physics with Astrophysics (Hons) – 2:1

October 2016 – June 2020

Crossley Heath Sixth Form (A Levels)

3 A Levels: Maths (A) Physics (B) Further Maths (B)

September 2014 – 2016

EXPERIENCE

Arbor Education – Product Engineering

May 2022 – Present

- As a Product Engineer at Arbor, I play a pivotal role in developing impactful and innovative data-driven solutions for the UK education sector. I collaborate closely with product management and school stakeholders to design, develop, and deploy features that enhance data analysis, streamline workflows, and provide actionable insights. My contributions include building a national data portal, integrating AI-powered features in our product, and developing data-centric dashboards.
- National Data Portal** - I developed a Python web application to visualise anonymised student and staff data from 8,000 schools for journalists, researchers, and government officials. This data portal was instrumental in the collaboration with the Greater London Authority to analyse free school meal uptake in London. To demonstrate the power of LLMs and allow more users to interact with the product, I integrated an AI chatbot, enabling non-technical users to explore complex data sets. This involved setting up a series of agents, each being expert in a particular section (Attendance, Behaviour, etc.), with an orchestration agent that delegated tasks and summarised the final response to the user. I was recognised with an internal award for the most impactful engineer at our annual conference.
- Snowflake Data Warehouse** - Worked with Data Analysts and Engineers to build views in a medallion architecture, for consumption in the National Data Portal I built, as well as for customers building PowerBI dashboards for their schools. I successfully delivered this over a month to tight deadlines and with a high workload.
- Student Dashboard** - In collaboration with school leaders, I designed and developed a student-centric dashboard. This tool consolidated data from various sources, providing a comprehensive overview of student performance. By prioritising user experience, I ensured the dashboard was intuitive and effective.
- AI-Powered Intervention Tool** - To streamline the intervention process, I created an LLM-based tool that used OpenAI models to transform user inputs into actions in our system. This innovative solution significantly reduced the time and effort required to generate interventions, previously a manual task involving 40+ clicks and 10+ minutes. I completed this project alongside my other responsibilities.

- Contributed to the design and development of a future IT system. Utilised skills in systems analysis, modelling, and stakeholder management. Employed industry-standard modelling languages and tools, such as ArchiMate, to visualise complex systems. Collaborated effectively with cross-functional teams and communicated technical concepts.
- I played a key role in the team developing a web-based CRM/timesheet application to replace a legacy application Actica was using. This was built using the Django framework, advancing my initial web development skills in an Agile environment.

Masters Project – Machine Learning in Extragalactic Astrophysics

September 2019 – April 2020

- This project involved researching and developing image recognition techniques through machine learning to classify galaxies based on their morphologies. I built convolutional neural networks using Python machine learning libraries and researched how pre-training these models on different image datasets could improve their overall performance.

TECHNICAL SKILLS

LANGUAGES

- Python
- PHP (Symfony)
- SQL (MySQL, PostgreSQL, SnowflakeSQL)
- React
- HTML/CSS

Principles/Other Software

- Snowflake Data Warehouse
- Azure/AWS
- Git/GitHub/Github Actions
- OOP/DRY/TDD/CI/CD
- Automated Testing (Unit Testing/ UX testing)
- Linux/Windows/MacOS
- PowerBI

Interests

I believe in maintaining a well-rounded lifestyle, which includes a strong focus on physical activity and exploration. I regularly participate in cross-country, half-marathon, and marathon races. I'm also actively training for an upcoming triathlon, fueled by my love of cycling and swimming. My recent travels through South East Asia were incredibly enriching, and I look forward to embarking on a challenging hike to Everest Base Camp soon. Additionally, I enjoy the mental and physical engagement of both roped climbing and bouldering.