

Matthew Budd

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I am a Physics Student in the third year of my undergraduate degree with integrated masters at the University of Cambridge. Consistently working to boost my academic performance, I have found the satisfaction I get from consistently learning and developing at the fastest possible rate inherently important to me. I found myself most pushed exploring the field of machine learning and look to maximise my development with an internship for summer 2025.

Education

University of Cambridge, BA (Hons) and MSc Physical Natural Sciences

Sept. 2022 - Present

- First year: 1:1 with Distinction - 76% - including Maths, Physics and Materials Science for which a placing of 6/300 was achieved.
- Second year: 1:1 with Distinction – 79% - Maths, and 2 Core Physics Modules in which placings were 14/220 and 16/220
- Awarded the John Bowyer Buckley Prize for Academic Performance
- University Chess Team, Algorithmic Trading Society, Cambridge AI Safety Hub, College Football, and Rugby.

Alleyn's School, London

Sept. 2020 - July 2022

- A Levels: Maths (A*), Further Maths (A*), Physics (A*), Biology (A*)
- Co-Curricular activities include School football, Founder of Astronomy society, Hans Woyda Math Team Leader, and Chess Club.
- Earned Duke of Edinburgh Gold Award, School Form Physics Prize, Hans Woyda Maths Team Captain, six UK Maths Challenge Gold Awards and 5 Kangaroo Merit Awards, BPhO Gold Award, BBO Gold Award.

Building My Skillset

- **Python and C++ experience** – Utilising Python to supplement scientific reports first developed my interest in programming. I then looked to further my programming skill. This included the Harvard CS 50 program, in which I was able to develop both problem-structuring and python proficiency. From there I have been able to build projects of my own, which so far include a website for my college football team built from scratch (HTML), a basic chess engine, and an interactive solar-system simulation. I am also consistently building my skillset with structured learning on LeetCode maintaining a focus on data structures and algorithms.
- **Cambridge AI Safety Hub's Intro to ML course** – This course covered the fundamentals and more of machine learning, with a specific focus on AI safety principles. This enabled me to develop a strong foundation with Pytorch, as well as develop theoretical understanding of training simple neural networks using optimisation, hyperparameters, and back-projection. I also built in-depth practical skills performing exercises with a strong focus on interpretability, such as building my own transformer, using the TransformerLens library and through extensive experimentation with GPT-2.
- **European Space Agency Can-Sat Competition National Finalist** – I worked with a small team, as Lead Parachute Engineer, to send a miniature satellite into the atmosphere. I conducted research and in-depth modelling to ensure deployment and descent within a tight regulation window. Co-ordinated with Arduino Teams and Structural Designers to ensure a consistent approach across divisions, and to quantitatively test and analyse live data.

Work Experience

Epiris Summer Analyst

Ongoing

- Delivered key research into the Private Equity space within new regions, giving a detailed presentation on findings.
- Took the initiative to learn Power BI to analyse and present key data for portfolio companies, pushing the boundaries of the firm's usage of this software. Researched and led Seniors to develop their technicality, with a key focus on querying datasets.
- Presented an in-depth highly appraised case study, analysing an IM and attached Due Diligence Reports to form a balanced and data-supported argument for my final decision.
- Improved market research efficiency 300%+ by implementing a scraping algorithm to automate industry classification.

Deloitte Summer Analyst

June 2024 – July 2024

- Developed my professional skills working alongside the Audit department on the audits of complex listed entities.

- Built Analytical proficiency working on large data sets in excel and other tools to analyse company performance and identify risk.
- Identified inefficiencies within Excel related tasks. This led me to learn VBA to develop Macros to streamline repetitive.
- Although initially apprehensive, this was highly praised by my manager as being 'transformational' and my package of 10 macros which I deemed to be the most needed was downloaded by 10+ people.
- Worked beyond what is expected to complete the 30-hour Deloitte AI certificate between engagement tasks.

Maths and Science tutor, Athena Tuition

June 2022 – Present

- Worked with several home and international students to develop their problem-solving and numerical skills.
- Was successful in raising grades by as many as 3 levels for both A-level and GCSE students.
- Gave university admissions test guidance to prospective Oxbridge undergraduates.

Other Initiatives

- Freshers Week External Events Officer – I worked to co-ordinate a variety of events outside the College for a group of over 150 students. I developed my organisational skills by Co-ordinating with other leaders to ensure correct timing, and ensure Students were able to purchase and access their tickets.
- Girton College Football Social Secretary – Led each respective team through team-building exercises, and Co-ordinated with other teams and Event venues to organise social events.
- Ritangle Competition – Led a team through the annual Ritangle Maths competition to a top 40 ranking globally. This enabled development of my problem-solving skills through a set of rigorous puzzles.
- Completed the St. Mary's University Advanced Astrophysics course whilst still in school, as part of trying to develop my greater numerical skillset.
- Participated in a Charity Novice Boxing in front of over 700 people to raise money for The OddBalls Charity