Maxwell Catmur

[maxcatmur@icloud.com](mailto:maxcatmur@icloud.com) | +44 7507 968831 | 54 Derby Road, London, E18 2PS | [linkedin.com/in/maxwell-catmur-1475a2209](http://www.linkedin.com/in/maxwell-catmur-1475a2209) | [github.com/mcatmur32](https://github.com/mcatmur32)

# Profile

Upcoming Physics graduate targeting Trading Desk Operations Engineer (TDOE) roles. Experienced in technical coding, data queries and supporting production workflows — building tools and optimising infrastructure using Python, MATLAB and SQL. Collaborative, curious problem-solver with strong communication and stakeholder coordination.

# Education

**MPhys Physics – University of Warwick October 2022 – July 2026**

**Grade:** First (expected)

* Achieved high marks across years one to three (85%, 89%, 82%).
* Relevant modules: scientific and high-performance computing, advanced mathematical methods, fluid mechanics, electromagnetism, quantum mechanics, condensed matter and statistical physics.
* Extensive numerical and simulation work: Monte Carlo simulations for the 2D Ising model, N-body integrator with 10,000+ runs and MEGNO analysis, and a C finite-difference PDE solver modelling industrial heat flow.
* Co-developed a LabVIEW stabilisation algorithm with PID control and led two 6-member group research projects, scheduling meetings and delegating tasks.

**A-levels – Forest School September 2020 – July 2022**

**Grade:** A\*A\*A\*A\*A\* (Maths, Further Maths, Physics, Chemistry, EPQ)

# Work Experience

**RF Seekers Summer Intern June 2024 – August 2024**

MBDA UK

* 10-week placement in the Modelling and Algorithms team working on radar processing chains for AESA systems.
* Optimised a key algorithm in MATLAB, reducing runtime by 85% and improving overall pipeline performance; implemented unit tests for validation.
* Co-developed a data-analysis application used by six colleagues to rapidly inspect range–Doppler images during performance campaigns; maintained the codebase with 50+ commits using version control.
* Presented technical outcomes to 20+ colleagues and documented work to support handover and subsequent development.

# Projects

**Tailored CV Generator July 2025 – present**

* Developed a CV and cover-letter generator using OpenAI's API in Python, producing structured JSON outputs validated with Pydantic and rendered to Word via docxtpl.
* Utilised robust prompt engineering strategies to mitigate hallucinations.
* Built a SQL database to store and track job applications and outcomes; achieved >80% on multiple ATS-checker sites.
* Maintained the project with GitHub version control and implemented input validation and an intuitive graphical user interface.

# Skills

**Languages**: Python, MATLAB, C, SQL, JSON, Fluent English.

**Tools:** GitHub, Microsoft Office Suite.