

Tom Szwarczer

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[tomszwarczer.github.io](https://github.com/tomszwarczer)

Education

Oriel College, University of Oxford (Physics)

2021-present

- Scholarship awarded - prize for 2nd year exam performance, overall score of 73
- 5 prizes awarded for performance in internal college exams
- Scored 98 in 2nd year practical component

Kenilworth School and Sixth Form

2014-2021

- A*A*A* (Maths, Further Maths, Physics) A-Level
- 99999999777A*A^ (A* with distinction) GCSE

Projects

Detailed information, including reports, presentations and further projects can be found at [tomszwarczer.github.io](https://github.com/tomszwarczer)

Dark Matter Summer Placement

2024

- Eight-week internship with the particle physics department at STFC
- Simulation of electron interactions leading to scintillation light production in gas detectors
- Developed skills in C++, data analysis, parallel computing, bash, presenting scientific work and using tools for simulating electron interactions in the presence of gas and E-fields
- Regularly presented my progress to the collaboration and assembled a project report

Third year mini project

2024

- Extended astrophysics practical project, processing observational images including data reduction. By fitting isochrones to the processed data, the age, distance, and extinction parameters for stellar clusters were obtained.
- Results presented in a scientific report
- Received a score of 85

Comprehensive QM and linear algebra summaries

2022, 2023

- Compiled extensive LaTeX formatted notes on quantum mechanics and linear algebra, distributed to 1st and 2nd year students
- Developed communication skills and deepened my own understanding in these areas

Technical Skills

- Python (including for data analysis), C++, MATLAB
- Bash and using Linux
- Simulation tools: Gmsh, Elmer, Garfield++, Magboltz, ROOT
- Parallel computing (HTCondor) and version control (Git)

Employment

- Private tutoring (GCSE maths), service staff