Noah Trane

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About Me

Second-year engineering student at the University of Oxford with strong mathematical skills and growing experience in programming. Keen interest in machine learning, data analysis, programming and mathematics. Currently building technical skills in Python and in AI, and working on small coding projects to strengthen practical skills. Seeking a summer internship to apply analytical thinking, programming skills, and mathematical knowledge in a technical setting.

Education

St Gerard's Secondary School, Leaving Certificate — Sep 2019 - Jun 2024

- Leaving Certificate score: 625/625, including an A* in Mathematics, Applied Mathematics, Physics, Chemistry, Biology, French and English
- Achieved the highest score in Ireland in Mathematics, Applied Mathematics and Physics at the final exam

University of Oxford, Masters of Engineering — Sep 2024 - Present

- Predicted Grade: First Class Honours (based on performance in Prelims; final classification determined in later years)
- Relevent Coursework: Calculus I–III, Linear Algebra, Complex Algebra, Ordinary Differential Equations I & II
- Awarded a first in Mathematics and coding assessments, with a score of 48/50

Skills

Programming

- Python, MATLAB, HTML/CSS, JavaScript (applied in projects).

Mathematics and Sciences

- Proficient in calculus, linear algebra, complex analysis, numerical methods; growing in optimisation and probability

Experience

Verity AI — Part-Time Developer — May 2025 - Present

- Contributing to development of early-stage AI prototypes in a startup environment.
- Applying Python to build and test machine-learning models.
- Collaborating with a small team to design algorithms and explore product applications.

University of Oxford Engineering Committee — Apr 2025 - Present

- Represented students on the Engineering Committee, collaborating with professors to address academic and welfare matters

Projects

Basketball Game

- Built a two-player basketball game in MATLAB with physics-based ball mechanics and scoring

Spotify API

- Developed a Python app integrating the Spotify Web API with OAuth authentication to retrieve user data.

Personal Portfolio

- Designed and developed a personal website to showcase projects and experience.

Additional Mathematical and Physics Projects

- Designed and iterated a rocket launch simulation model including fuel usage and safety requirements.
- Implemented multiple mathematical simulations (e.g. Monte Carlo π estimation, Collatz conjecture) with visualization in Python
- Developed a complex iterative model of rollercoaster safety, simulating g-forces and radius constraints through mathematical modelling and computation.