

Eric Taylor

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EDUCATION

- University of Oxford, Worcester College** – *DPhil in AI for the Environment* 2026-2030
- Incoming DPhil student in the Intelligent Earth CDT; UKRI-funded
- Imperial College London** – *MSc Environmental Data Science and Machine Learning* 2025-Present
- Current taught-module average: Distinction; expected completion September 2026
 - Relevant Modules: Computational Mathematics; Data Science & ML, Deep Learning, Advanced Programming
- University of Cambridge, Pembroke College** – *BA (Hons) Geography* 2022-2025
- First-Class Honours with Distinction; ranked 1st in Physical Geography

RESEARCH / TECHNICAL PROJECTS

- Master's Thesis, Imperial College London and Moody's Analytics** 2026
- Domain-informed deep learning for downscaling tropical cyclone waves to hazard-relevant spatial scales.*
- Supervisors: George Pouliasis, Professor Matthew Piggot
- Developed a PyTorch framework for kilometre-scale super-resolution of tropical-cyclone wave fields using U-Nets and Wasserstein GANs.
 - Designed domain-informed architectures and physics-based losses incorporating bathymetry, wave direction and physical constraints.
 - Evaluated model reliability under geographic distribution shift and rare extreme events.
 - Built reproducible pipelines for data processing, training, full-scene inference and model evaluation.
- Undergraduate Dissertation, University of Cambridge** 2024-2025
- Remote sensing early supraglacial debris evolution on a mountain glacier using an energy balance model, thermal imagery, and climate reanalysis data.* Supervisor: Dr. Rebecca Dell
- Developed an energy-balance inversion framework to estimate supraglacial debris thickness from thermal satellite imagery and climate reanalysis data.
 - Quantified spatial and temporal debris evolution and analysed physical controls on debris-cover development.
 - Awarded 91%; William Vaughan Lewis Prize; Highly Commended for RGS best UK undergraduate dissertation.
 - Presented this work as a poster at the 2025 International Glaciological Society British Branch meeting, Oxford.
- Independent Project** Jan-Mar 2026
- Trained a U-Net-style model in PyTorch to estimate sea-ice concentration from dual-polarisation SAR (HH/HV).
 - Implemented masked regression loss and patch sampling from large scenes.
 - Published a reproducible codebase (installable project, notebooks, evaluation).
- Independent Project** May 2025
- Classifying ice surface types in the Everest Region using machine learning.*
- Built a supervised Landsat 8 pixel classifier (Random Forest) using Google Earth Engine to label ice surface types.
- Research Assistant to Mike Hulme, University of Cambridge** Aug 2025
- Processed and analysed large climate datasets in Python and produced publication-quality figures for forthcoming research.

APPLIED EXPERIENCE

- Stratospheric Platforms Limited** – *Project Intern* Jul-Aug 2024
- Developed MATLAB spatial-modelling algorithms for 5G coverage and analysed UK population data to estimate coverage requirements and performance trade-offs.

AWARDS

- Offered a fully funded NERC Doctoral Landscape Award studentship, University of Cambridge (declined) 2026
- Philip Lake Prize – highest performance in Physical Geography, University of Cambridge 2025
- William Vaughan Lewis Prize – First-Class dissertation (top 15% of marks) 2025
- Pembroke College prizes and scholarships for First-Class exam results 2023-2025

LEADERSHIP & COMMUNICATION

- Cambridge University Geographical Society** – *Treasurer (2023-2024) and President (2024-2025)*
- Led a 12-person committee, organised speaker and social events, modernised the society website, and introduced new accounting systems.
- Content Creator (YouTube)** 2019-2023
- Built a Minecraft tutorial channel to 40,000 subscribers and 8M+ views.