Curriculum Vitae - Tom Yates

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Education

2025-present — **Imperial College London - PhD candidate, Dyson Robotics Lab**

Researching Gaussian Belief Propagation for distributed probabilistic inference in Spatial AI. Supervised by Andrew Davison, funded by ARIA.

- **The Central Limit Theorem in Belief Propagation:**
  Defined the conditions in which highly non-Gaussian random variables will converge to Gaussian distributions under the Central Limit Theorem when using discrete non-parametric Belief Propagation for inference in complex factor graphs.
  This project has been submitted to ICML 2026.
- **Quantised Gaussian Belief Propagation:**
  Exploring the minimum number of bits to be sent that guarantees variables to converge to their correct marginal belief within a given error tolerance when optimising a factor graph with Gaussian Belief Propagation.

2015 - 2019 — **University of Oxford - MEng Engineering Science, 1st**

- Specialised in Information Engineering, Machine Learning and Robotics
- Research Project published to TAROS 2019 in Quadruped Robot Motion Planning. Winner of conference's award for best paper.

2008 - 2015 — **Latymer Upper School**

A-Levels: Maths A*, Further Maths A*, Physics A, English Literature A
GCSEs: 11x A*s
Prizes: Abbott Prize for Physics

Experience

2024-2025 — **ARIA - Programme Specialist**

2-year old research funding agency, funding & commercialising high-risk, high-impact UK academic research

- Programme manager for a £75m neurotechnology research programme, funding a portfolio of ambitious research groups, start ups & individuals with high-impact potential in the UK
- Working closely with PIs and CEOs to secure resources and talent in a programme of 19 projects, evaluated from 130+ applications

2023-2024 — **Anduril Industries - Mission Operations Manager**

Hyper-growth defence-tech start-up developing robotics & embodied AI solutions for the UK military

- Led the initial deployment for Anduril's autonomous, AI-enabled hardware for the UK's overseas military bases
- Navigated radiation compliance, signal jamming and connectivity challenges to maintain and develop advanced robotics products in dynamic and complex environments

2020–2023 — **Newton Europe - Senior Digital Consultant**

Operational consultancy delivering impact-based improvement programs in UK engineering firms

- Delivered operational improvements through digital transformation to UK FTSE 500 companies across a range of sectors including defense, infrastructure and healthcare with multi-million value.

Personal Interests

Running - In April 2025 I ran the Marathon Des Sables, a 250km ultramarathon in the Sahara desert.
Sailing - In January 2023 I sailed across the Atlantic Ocean, participating in the RORC Transatlantic race.