# Rosco Hunter

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## INTERNSHIPS AND COLLABORATIONS

## Freelance AI Safety Projects

Jan. 2024 - Present

- Awarded the Cambridge University (ERA) AI Technical Governance Fellowship in order to research policy recommendations for improving the sensitivity and specificity of the LLM alignment procedure
- Researching the opportunities and risks of open-source LLMs with guidance from Ben Bucknall

# Abacus (AI Startup – San Francisco)

Jan. 2024 – Mar. 2024

- Analysing the precision of open-source large language models on several arithmetic benchmarks
- Designing a mixture-of-experts to improve the efficiency and performance of LLaMA at arithmetic

# Samsung AI Centre - Cambridge

Jan. 2023 - Dec. 2023

- Improved neural network's efficiency at image classification and generation, resulting in two papers:
  - o Fast Inference Through the Reuse of Attention Maps in Diffusion Models [pdf]
  - o Exploiting Network Compressibility and Topology in Zero-Cost NAS [pdf]
- Awarded 'Best Paper' at the International Conference on Automated Machine Learning (2023)

# Oxford Centre for Computational Neuroscience

Jun. 2021 – Dec. 2022

- Researched computational models of pyramidal cells, sparse distributed memory, and cortical connectivity
- Refined the explanation and implementation of a 'Hopf effective connectivity algorithm'
- Acknowledged in a collection of journal articles that have since accrued over 200 citations

#### **EDUCATION**

## University of Warwick

Oct. 2019 - Present

PhD in Machine Learning (2022-Present)

- Research focuses on Neural Architecture Search and Efficient AI
- Supervised by Prof. Hongkai Wen Advised by Prof. Magnus Richardson and Dr. Long Tran-Thanh

# BSc Mathematics (2019-2022)

- First Class Degree (85.0%) receiving a first in all 25 assessed modules
- Key Modules: Mathematics of Machine Learning; Mathematical Biology; Neural Computing; Bifurcations & Symmetries; Modelling & Numerics; Measure Theory; Applied Dynamical Systems; Advanced Linear Algebra

## **Secondary Education**

Oct. 2015 – Jul. 2019

- A-levels: 4 A\*s in Mathematics, Further Mathematics, Physics, Psychology
- GCSEs: 10 A\*s with a distinction in Further Mathematics

## **TEACHING & SPEAKING**

- Graduate Teaching Assistant:
  - Mathematics of Machine Learning (MA3K1), University of Warwick, 2024
  - First-Year Mathematics Supervisor, University of Warwick, 2023
- Public Speaking:
  - Best Paper Talk, International Conference on Automated Machine Learning, Hasso-Plattner Institute, 2023
  - Zero-Cost Proxies for Neural Architecture Search, WPCCS, University of Warwick, 2022