

# Rosco Hunter

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## RESEARCH COLLABORATIONS

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### Freelance AI Policy Projects Jan. 2024 – Present

- Researching the opportunities and risks of conversational end-user programming for large language models with guidance from Ben Bucknall (Centre for the Governance of AI) and Elizabeth Serger (Demos)
- Researching the potential impacts of generative AI on the offense-defense balance

### Abacus.AI Jan. 2024 – Present

- 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 Cambridge AI Research Jan. 2023 – Mar. 2024

- Improved neural network's efficiency at image classification and generation, resulting in two papers:
  - Fast Inference Through the Reuse of Attention Maps in Diffusion Models
  - Exploiting Network Compressibility and Topology in Zero-Cost NAS
- Awarded 'Best Paper' at the International Conference of 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

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### University of Warwick Oct. 2019 – Present

*PhD Candidate in Machine Learning*

- 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*

- 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

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### ▪ 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