

# Michael Matthews

Machine Learning PhD Student

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## Education

October 2023 - April 2027 (expected)

**University of Oxford** - DPhil Engineering Science

- Broadly interested in open-endedness and reinforcement learning (RL).
- Supervised by Dr. Jakob Foerster as part of FLAIR.
- Funded by an EPSRC DTP Research Studentship.

September 2020 - September 2021

**University College London** - MSc Machine Learning

- Supervised by Prof. Tim Rocktäschel and Prof. Edward Grefenstette.
- Worked on skill transfer in RL.
- Distinction (84%) and Dean's List.

September 2017 - July 2020

**University of Cambridge** - BA Computer Science

- Upper second class honours (75%).

## Conference Publications

**M. Matthews**, M. Beukman, B. Ellis, M. Samvelyan, M. Jackson, S. Coward, J. Foerster - [Craftax: A Lightning-Fast Benchmark for Open-Ended Reinforcement Learning](#) at *ICML 2024 (Spotlight)*

M. Beukman, S. Coward, **M. Matthews**, M. Fellows, M. Jiang, M. Dennis, J. Foerster - [Refining Minimax Regret for Unsupervised Environment Design](#) at *ICML 2024*

M. Jackson, **M. Matthews**, C. Lu, B. Ellis, S. Whiteson, J. Foerster - [Policy Guided Diffusion](#) at *RLC 2024*

**M. Matthews**, M. Samvelyan, J. Parker-Holder, E. Grefenstette, T. Rocktäschel - [Hierarchical Kickstarting for Skill Transfer in Reinforcement Learning](#) at *CoLLAs 2022*

## Work

October 2021 - June 2023

**VivaCity, London** – Machine Learning Researcher (Reinforcement Learning Research Team)

- Applied reinforcement learning methods to traffic control.
- Collaborated with the production team to deploy the system to the real world.
- Investigated and solved sim2real issues.
- Kept up to date with the RL and machine learning literature.

June 2019 - September 2019

**G-Research, London** – Software Engineering Intern

- Developed and maintained internal software for facilitating trading.

June 2018 - September 2018

**PlayFusion, Cambridge** – Software Engineering Intern

- Developed an RL agent for purposes of balancing the company's digital trading card game.

## Selected Awards

2024	ICML Spotlight	(top 13% of accepted papers)
2021	UCL Dean's List	(top ~5% of cohort)
2018	Scholar of Gonville and Caius College	(top 25% of cohort)
2017	Award for top 50 in Computer Science A-Level	(top 0.7% nationwide)

## Programming Languages

### Proficient

Python (JAX, PyTorch)    Java

### Familiar

C#    TypeScript    Angular    SQL    C/C++    GLSL    Poly/ML    Prolog    HTML/CSS

## Other Interests

Mountaineering/Climbing (CUMC Indoor Meets Secretary 2019/2020), Rowing (Mansfield Boat Club Men's Side Captain 2024/2025), Olympic Weightlifting, Game Development.