Matthew Jackson

matthewtjackson.com @ jackson@robots.ox.ac.uk

Education

UNIVERSITY OF OXFORD
DPhil in Autonomous, Intelligent Machines and Systems
2022 – 2026 Oxford, UK
Working with Shimon Whiteson and Jakob Foerster.

UCL
MSc in Machine Learning
Sep 2021 London, UK
Distinction, 87%.

UNIVERSITY OF CAMBRIDGE
BA in Computer Science
Jul 2020 Cambridge, UK
First-Class Honours, 86%.
Ranked 2/99 in cohort.

Courses

GRADUATE
Approximate Inference
Autonomous Robotics
Deep Learning
Multi-Agent AI
Natural Language Processing
Reinforcement Learning
Supervised Learning
Unsupervised Learning

UNDERGRADUATE
Algorithms
Computer Vision
Graphics
Information Theory
Mobile and Sensor Systems
Networking
Operating Systems

Skills

LANGUAGES
Python • C/C++ • Java • HTML/CSS • SQL • OCaml • Bash

TOOLS
PyTorch • TensorFlow • JAX • SQL • Git • Microsoft Office • LaTeX

Links

EmptyJackson
Matthew-T-Jackson
JacksonMattT

Experience

AMAZON | Software Engineer Intern
Jun 2020 – Sep 2020 Cambridge, UK
- Worked in the Alexa Knowledge group.
- Developed software to rank the relevance of natural language answers, running on all Alexa Q&A queries.

ARM | Machine Learning Intern
Jun 2019 – Sep 2019 Cambridge, UK
- Worked in the Machine Learning Software Group on Arm's neural network inference engines.
- Reviewed deep learning research and added support for new operations, whilst optimizing their performance on Arm hardware.

CUBICA TECHNOLOGY | Computer Vision Intern
Jul 2018 – Sep 2018 Woking, UK
- Developed a script to identify and label reoccurring identities across a database of security footage.

Research

Hypernetworks for Meta-Reinforcement Learning
J. A. Beck, **M. T. Jackson**, R. Vuorio, S. Whiteson
Under review
Proposed a meta-RL agent architecure utilising hypernetworks with a novel meta-initialization method.

Multimodal Fusion by Meta-Initialisation
M. T. Jackson*, S. A. Malik*, M. T. Matthews, Y. Mohamed-Ahmed
FARSCOPE Robotics Conference, 2022; ***Best Poster Award***
Proposed an gradient-based meta-learning method for multimodal few-shot learning, using hypernetworks conditioned on auxiliary task information.

Self-Supervised Meta-Reinforcement Learning
M. T. Jackson, R. Kirk, T. Rocktäschel, E. Grefenstette
MSc thesis; explored the application of self-supervised representation learning to the Alchemy meta-RL benchmark.

Real-Time Video Super-Resolution
M. T. Jackson, J. Zhu, P. Liò
BA thesis; researched computationally efficient approaches to video super-resolution, enabling real-time inference.

Honors

DEAN'S LIST 2020–2021
University College London

SENIOR SCHOLAR
Gonville & Caius College, University of Cambridge

HIGHLY-COMMENDED PART II DISSERTATION
University of Cambridge

DUKE OF EDINBURGH AWARD
Gold, Silver and Bronze levels