

Adam Thomas-Mitchell

📍 Belfast, Northern Ireland ✉ atmitchell017@gmail.com 🔗 linkedin.com/in/adamthomas-mitchell/ 🌐 github.com/AdamThomas-Mitchell

SUMMARY

Artificial intelligence MSc graduate and software developer seeking to develop advanced AI solutions for real world problems. Proficient in Python, including packages such as SciKit Learn, PyTorch, and TensorFlow. Experience with data preprocessing, Bayesian methods, reinforcement learning, and deep learning.

EDUCATION

Master of Science in Artificial Intelligence

Ulster University • Belfast • September 2021 – January 2023 • Distinction (83%)

Bachelor of Science with Honours in Mathematical Physics

University of Edinburgh • Edinburgh • September 2016 – June 2021 • 2:1

RESEARCH EXPERIENCE

MSc Research Project

- Worked with the Quantum Chemical Topology group at Manchester University to improve the efficiency of their state-of-the-art Machine Learning Force Field used for molecular dynamics simulations.
- Investigated post-hoc calibration for regression and Student-T Processes as alternatives to Gaussian Processes to improve uncertainty quantification and active learning.
- Research paper has been submitted to the Machine Learning: Science and Technology journal, awaiting peer review.

A Comparative Study of Deterministic and Stochastic Policies for Q-learning

- Second author on paper accepted for the Artificial Intelligence, Robotics, and Control 2023 conference.
- I Developed a reinforcement learning model using an Epsilon-Greedy Q-Learning algorithm to solve a GridWorld problem.
- We showed that deterministic policies outperform stochastic policies in the test environment under a variety of different hyperparameter permutations.

Reinforcement Learning Research Project

- Currently investigating ways of incorporating the transformer architecture into a Deep Q-Network to improve performance on the Atari 2600 game environment.
- Training models on Kelvin2 high performance computing cluster with GPU acceleration.
- Submitting research paper for publication in July 2023.

INDUSTRY EXPERIENCE

Software Developer

Version 1

September 2022 – Present, Belfast

- Completed intensive 12 week training course and obtained four industry recognised certifications for cloud computing, software development, and cyber security.
- Leveraged Java skills to write production-ready code for a Civil Service web application following test driven development principles.
- Experience with Agile and scrum project management methods and Git version control.

AWARDS

Economic Recovery Masters Scholarship

Department of the Economy • 2021

Certificate of Merit for Physics

University of Edinburgh • 2017

Margaret Campbell Scott Scholarship

University of Edinburgh • 2016