Akbir Khan

akbir.dev

Research Interests

Multi-Agent Reinforcement Learning, Natural Language Processing, AI Safety

Education

2021-2024 Ph.D. in Foundational Artificial Intelligence, University College London
Advised by Ed Grefenstette & Tim Rocktäschel

2017-2018 MPhil. in Advanced Computer Science, *with distinction*, University of Cambridge

2015-2018 MSci. in Mathematics with Physics, *with 1^{st} class honours*, University College London

Work Experience

2021- Senior Applied Researcher at Tractable AI. Highlights include unlocking £8 Million in revenue by developing OCR ingestion pipeline and developing continual learning process for model improvements.

2018-2021 Chief Research Office at Spherical Defence. Raised a $2 million seed round and developed a ML-based web application firewall service. Led a team of research engineers to develop seq2seq models for anomaly detection over network traffic.

2017 Software Engineer Internship at Deutsche Bank, focus on front-end development.

2016 Two months as an Undergraduate Research Fellow at Quantum Optics and Laser Group at Imperial College London.

Publications

Multi-dimensional Affect in Poetry (POCA) Dataset: Acquisition, Annotation and Baseline Result - Khan, A., Hopkins, J., & Gunes, H. In *The 9th International Conference on Affective Computing and Intelligent Interaction.*

Considering Race as a Problem of Transfer Learning - Akbir Khan, Marwa Mahmoud. In *Proceedings of the 2019 IEEE Winter Applications of Computer Vision Workshop: Demographic Variations in Performance of Biometric Algorithms* (oral presentation)

Recent Projects

Deep Equilibrium Models, a Haiku implementation of the NeurIPS 2019 paper, an implicit-depth differentiable architecture that simulates an infinitely) deep network
Bad Flamingo, a gamified data collection of sketches for adversarial machine learning. Awarded 1^{st} Prize at the University of Cambridge Ternary Hackathon

Technical Skills

Python [PyTorch, JAX (*contributor*), Scikit-learn, Pandas, Haiku], Docker, GoLang