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

2013-2017 MSci in Mathematics with Physics, *with 1st class honours*, University College London

2016-2017 Exchange Student in Mathematics Specialist, University of Toronto

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 Officer at Spherical Defence, where we raised a $2 million seed round. Led a team of research engineers to develop Seq2seq models with out-of-distribution methods for web application firewalls

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 Results - 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 1st Prize at the University of Cambridge Ternary Hackathon

Technical Skills

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