Akbir Khan

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Education	**University College London**	2021-2025
	PhD in Foundational Artificial Intelligence	
	Advisors: Ed Grefenstette, Tim Rocktäschel	
	Sidney Sussex, University of Cambridge	2017-2018
	MPhil in Advanced Computer Science	Pass with Distinction
	University College London	2013-2017
	MSci in Mathematics and Physics	1ˢᵗ Class Honours
	Study abroad at Univ. of Toronto - Mathematics	

Experience

Tractable — 2021
Senior Applied Researcher
Research lead for transformer based vision models for damage detection on cars
Technical lead developing scanned document ingestion, unlocking $8 million revenue
Developed continuous feedback process for active learning of existing product

Spherical Defence - AI/Cyber Security Lab — 2017-2020
Chief Research Officer
Employee #1, raised a $2 million seed and built an ML based Web Application Firewall
Recruited and managed team of (5+) research engineers to develop intellectual property
Devised novel unsupervised learning algorithms for anomaly detection
Developed service for training/inference models in scalable cloud deployments

Deutsche Bank — 2016
Software Engineer Intern
Created front-end (Javascript) for internal search engine of market data

Imperial College London — 2014
Research Assistant
Worked with David Jennings in the Quantum Optics and Laser Group.

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)**

Detecting Anomalous Application Messages In Telecommunication Networks
Dishant Shah, Jack Hopkins, Akbir Khan, Javid Lakha. In *World Intellectual Property Organisation under the Patent Cooperation Treaty*

Projects

Deep Equilibrium Model [akbir/deq-jax]
Haiku implementation of NeurIPS 2019 Paper - an implicit-depth architecture that solves/backpropogates through the equilibrium state of an (infinitely) deep network

Bad Flamingo [jayelm/bad-flamingo]
Gamified data collection of adversarial machine learning examples of sketched images
Awarded 1ˢᵗPrize at the University of Cambridge Ternary Hackathon

Awards

Foundational Artificial Intelligence Scholarship - UCL
Top 30 Teams - European Debating Championships 2016
Provost Excellence Scholarship - UCL
Berkley Exhibition Scholar - Grammar School at Leeds

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