

# Akbir Khan

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Education	<b>Sidney Sussex College, University of Cambridge, UK</b> MPhil in Advanced Computer Science Advised by Prof. Hatice Gunes and Jack Hopkins (Natural Language Processing and Affective Computing)	2017-2018 Distinction
	<b>University College London, UK</b> MSci in Mathematics and Physics Advised by Prof. Stephen Bramwell (Thermodynamics and Analytic Magnetic Systems)	2013-2017 1 <sup>st</sup> Class Honours
	<b>University of Toronto, Canada</b> Visiting Student in Mathematics and Computer Science	2015-2016 GPA: 3.3/4.0
Research	<b>Considering Race as a Problem of Transfer Learning</b> <i>A.Khan, M.Mahmoud</i> 2019 IEEE Winter Applications of Computer Vision Workshops (WACVW), <b>Oral</b> DOI: <a href="https://doi.org/10.1109/WACVW.2019.00022">10.1109/WACVW.2019.00022</a>	
	<b>Probabilistic Latent Bias - Evaluating Racism in Police Stop-and-Searches</b> <i>A.Khan</i> arXiv: <a href="https://arxiv.org/abs/2005.13463">2005.13463</a>	
Technical Skills	<b>Languages:</b> Golang, Python [PyTorch, JAX ( <i>Contributor</i> ), Scikit-learn] <b>Graduate Courses:</b> Probabilistic ML, Computer Vision, Entanglement Physics, Deep Learning for Natural Language Processing, Quantum Computation & Communication	
Experience	<b>Spherical Defence Labs</b> <i>Chief Research Officer</i> Manage a team of (+5) research engineers, developing intellectual property Joined as employee #1, raising a \$2 million seed round to build and manage product Researched and designed novel deep learning architecture to model tree-structured data Implemented neural network service for low latency/ highly scalable cloud deployments Co-authored patent to identify anomalous web traffic ( <a href="https://patents.google.com/patent/GB049653.00003">GB049653.00003</a> )	Jun. 2017 - Present
	<b>Deutsche Bank</b> <i>Software Engineer/Business Analyst</i> Created user interface for internal search engine of golden-source market and metadata Implemented MIFIDii regulation (€100m budget) at cross-divisional and global scale Designed project milestones and tracking metrics, to be used by all (300) projects	Jun. 2016 - Aug. 2016
	<b>Imperial College London</b> <i>Research Assistant</i> Worked with Prof. David Jennings in the Quantum Optics and Laser Group. Applied information theory to validate restrictions within quantum communication protocols	Jun. 2014 - Aug. 2014
Projects	<b>Bad Flamingo</b> [ <a href="https://github.com/jayelm/bad-flamingo">github.com/jayelm/bad-flamingo</a> ] Gamified data collection of adversarial machine learning examples of sketched images Awarded 1 <sup>st</sup> Prize at the Cambridge Ternary Hackathon	
	<b>Bag of Poses</b> [ <a href="https://www.github.com/am-khan/bag-of-poses">https://www.github.com/am-khan/bag-of-poses</a> ] Deep learning model for emotion detection from the body language of crowds	
Awards	Provost Excellence Scholarship - UCL Berkley Exhibition Scholar - Grammar School at Leeds	
Extra Curricular	<b>University Debating:</b> Finalist at Warwick 2016 and Yale 2018 inter-varsity <b>Charity:</b> DebateMate - mentoring children in areas of poverty through debate <b>Sports:</b> Member of the Sidney Sussex College mens rowing 2 <sup>nd</sup> team	