Akbir Khan

akbir.94@gmail.com | +44 753930 4857 | https://amkhan.me

EDUCATION

University of Cambridge, MPhil Advanced Computer Science   Oct'17 – May'18
- Thesis: "An Affective Representation of Poetry" – Developing An Affective Representation of Poetry
- Relevant Classes: Probabilistic Machine Learning, Deep Learning for Natural Language Processing, Affective Computing
- Awarded Pass with Distinction

University College London, MSci Mathematics and Physics   Sept'13 – Jun'17
- Thesis: "Analytic Modelling of Spin Ice" – solutions for magnetism in spin ice with theoretical comparison to dipolar liquids
- Grade: 1st Class Honours   GPA: 3.96/4.00
- Exchange Student: University of Toronto (Sept'15 – Apr'16)   Awards: Provost Excellence Scholarship

Leeds Grammar School   Sept'07 – Jun'13
- A Levels: 4A*s (Mathematics, Further Mathematics, Physics, Philosophy & Ethics), Merit in AEA Mathematics
- Awards: Berkely Exhibition Scholar (Highest achieving student of class), British Physics Olympiad 2nd Round

WORK EXPERIENCE

Spherical Defence Labs – Artificial Intelligence and Cyber Security Start Up (Employee #1)   May'17 – Present
Lead Research Engineer
- Designed novel (patent pending) unsupervised deep learning models to identify anomalous web API requests
- Negotiated investments of £2 million through pitching and networking to a combination of angel investors and VC funds
- Organised weekly discussions, journal reading groups and blog posts to help create intellectual property

Deutsche Bank, London   Jun'16 – Aug'16
Summer Analyst, Group Technology & Operations
- Programme Manager – Implemented MIFIDii regulation (€100 Million budget) at a cross-divisional and global scale. Designed standardised project milestones and tracking metrics, to be used by all (>300) projects
- Software Engineer – Implemented user interface for internal search engine of golden-source market data and metadata

Imperial College London   May'15 – Sept' 15
Research Intern, Quantum Optics and Laser Group
- Worked with Prof David Jennings, using information theory to validate restrictions within Quantum Communication

LEADERSHIP EXPERIENCE

UCLe Moonshot Launchpad – UCL's First Pre-Accelerator Programme   Sept'16 – May 17
Co-founder, Fintech Director
- Hosted fintech panel of Amazon, blockchain start-up Everledger, PWC and UCL Advances' Director to (>100) participants
- Shortlisted and mentored 8 finalists to pitch to a funding panel of experts such as from Cisco, BCG and Amazon

UCLU Debating Society   Jan'14 – Sept'15
Vice President, School's Chair
- Elected Chief Convenor, hosting the UCL schools debating competition, negotiating partnerships between other debating unions and increasing capacity to 300 attendees - resulting in the UK's largest (single day) schools debating competition
- Expanded community outreach by implementing new funding, to fully subsidise entry for (+100) state schools

Ministry of Defence   Sept'09 – Jun'13
Flight Sergeant, Combined Cadet Force
- Commanded the largest CCF Contingent (100+ members) in Yorkshire, organising and participating in military training exercise
- Promoted to Course Commander whilst completing the two-week Air Cadet Leadership Course at RAF station Cramwell

PROJECTS

Modelling Racial Bias in Stop-Searches through Bayesian Inference – Probabilistic graphical model utilising UK Police Data API
Walktrap Algorithm, Computing Communities in Large Networks – Implementation of Pons and Latapy paper of the same name
Bad Flamingo – Gamified data collection of Adversarial Training examples, won 1st Prize at the Cambridge Ternary Hackathon
Bag of Poses – Group body language analysis tool, based on convolution neural networks, for supervised learning problems

SKILLS, ACTIVITIES AND INTERESTS

British Parliamentary Debating
- European Debating Championships: Vienna (2015) – placed 39th out of 400 teams, highest achieved by a UCL team
- Finalist at international competitions including Warwick, Zagreb and 5th best speaker at the London Debating Intervarsity

Music – Seasonal volunteer coordinator at summer music festivals, including Leeds and Outlook Festival in Croatia
Film – Visited the British and Toronto Film Festival and lifetime member of the Prince Charles Cinema
Rowing – Member of the Sidney Sussex men's rowing crew
Technical Languages – Python (Multi-threading, TensorFlow, scikit-learn, NumPy, PyTorch, Keras), Lua (Torch)