

## EDUCATION

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### 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: 1<sup>st</sup> 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 2<sup>nd</sup> Round

## WORK EXPERIENCE

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### Spherical Defence Labs – Artificial Intelligence and Cyber Security Start Up (3 total employees incl)

May'17 – Present

#### Chief 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
- Sought out and secured pilot programmes with financial clients such as Barclays, London Stock Exchange and Santander

### 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

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### UCL 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

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**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 1<sup>st</sup> 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

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### British Parliamentary Debating

- European Debating Championships: Vienna (2015) – placed 39<sup>th</sup> out of 400 teams, highest achieved by a UCL team
- Finalist at international competitions including Warwick, Zagreb and 5<sup>th</sup> 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)