Imran Ahmed

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EDUCATION

University of Cambridge, Gonville & Caius College 2014 – 2018

BA and Masters (MEng) in Information & Computer Engineering

First Year Grade: *1st,* ***Second Year Grade:*** *1st,* ***MIT GPA:*** *5.0/5.0,* ***Masters Grade****: Distinction* (Top 10th Percentile)

Masters Project: A smart stethoscope to automatically identify lung diseases using Machine Learning

Relevant Courses: Computer Vision, Probabilistic Machine Learning, Practical Optimisation, Computational Neuroscience

Massachusetts Institute of Technology, Cambridge-MIT Exchange 2016 – 2017

Research Projects*:* CPU-based astronaut detection for the ISS; RL for the treatment of Sepsis (NIPS '17 ML4H workshop paper)

Relevant Courses: Intro to Algorithms, ML for Healthcare, Computer Systems Engineering, Biomedical Signal & Image Processing

EXPERIENCE AND SKILLS

Frameworks: OpenCV, Tensorflow, Caffe, sklearn, iOS, .NET **Languages**: Python, MATLAB, C++, Swift, C#, JS/HTML

McKinsey QuantumBlack, London: *(Advanced Analytics Consultancy) – Data Scientist* **Aug '18 – Present**

- Currently working on data-driven analytics projects for blue-chip clients across a variety of advanced industries.

Vivacity Labs, London: *(Computer Vision and Machine Learning Start-up) – Product Manager Intern* **June '17 – Sept. '17**

- Led the design and development of a novel Cordova-based mobile transport app ("MotionMap") to commercialise one of the world's largest city-wide smart-sensor deployments in Milton Keynes, UK.
- Developed internal web-tools to reduce the time spent manually annotating facilities within cities by more than five-fold.
- Facilitated the installation of the sensor network by creating algorithms to help lower installation costs by > £50,000.

Interactive Robotics Lab, MIT: *(Robotics Research Group) – Undergraduate Researcher* **Sept. '16 – June '17**

- Developed an astronaut detection system for the International Space Station, using machine learning. This formed part of a NASA-led research project at MIT for an autonomous robot ("Astrobee") which will be deployed on the ISS.
- Improved an open-source detection system and implemented a multi-processing module for parallelised classification.

Vivacity Labs, London: *(Computer Vision and Machine Learning Start-up) – Software Developer Intern* **June '16 – Aug. '16**

- Upgraded an outdated deep learning architecture to give a 300% increase in model training speed.
- Designed a computer-vision algorithm in C++ to optimise a segmentation network by processing the model's predictions and identifying uncertain output for model fine-tuning.

EXTRACURRICULAR PROJECTS

Hackbridge.io: *Student Innovation & Making Group; https://hackbridge.io* **Jul. '17 – Jul. '18**

- Founded a student organisation to foster an undergraduate 'maker' environment at Cambridge University, by organising weekly hackathons to encourage student to work on innovative side-projects/research.

Pure Interaction: *HackMIT 2017 Top 10 finalist; Microsoft Prize Winner* **Sept. '17**

- Created software to allow users to browse and interact with the web with just their gaze, facial expression and voice.

SpatialRL: *Improbable Prize Winner, Hack Cambridge 2017* **Jan. '17**

- Created a novel platform to facilitate the training of Reinforcement-Learning agents by combining Unity and SpatialOS.
- Successfully implemented DQNs to achieve a task and demonstrated that our platform could be used to train an A3C algorithm. Our team was awarded the Improbable prize at Hack Cambridge.

Educational Video Compression: *Prize Winner, Facebook Global Hackathon Finals; http://ylgh.github.io* **Oct. '16 – Dec. '16**

- Created a method to compress educational videos by 100x to reduce the data cost of accessing online education.
- We productised and donated our algorithm to DotLearn, an MIT-based education startup working on a similar problem.

Cambridge University Eco Racing, Cambridge UK: *Solar Vehicle Development; Business Manager* **Oct. '15 – June '16**

- Led a 10-person team to raise funds for this student-run organisation with an operating budget in excess of £1m.

AWARDS AND ACHIEVEMENTS

2017 – RAEng Future of Engineering Prize (Runner-Up): A national prize for engineers who display strong entrepreneurial talent.

2017 – MIT Sandbox Innovation Fund: Awarded a $5,000 grant to support the development of ML-based side-projects.

2015 & 2016 – Scholarships to Caius College, Cambridge: Awarded scholarships for my performance in my examinations.

2016 – RAEng Engineering Leaders Scholarship: Awarded a £5,000 scholarship for demonstrating strong leadership potential.