Tyler Farghly

Place and Date of Birth:	Lincoln, England | 25 June 1998
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Work Experience

Jul – Sept 2018 — Undergraduate Researcher in Statistics at Imperial College London
- Studied the mathematical theory behind machine learning models
- Engaged in research about the effects of dropout on deep neural networks

Apr 2018 – Present — Technical Advisor at Sonodot Ltd
- Analysing routing methods using computer simulation and data modelling
- Assisting in software development and employing for technical roles

Sep 2017 – Apr 2018 — Head of Software and Data at Sonodot Ltd
- Technical lead of a smart warehouse startup as it entered an accelerator
- Led the development of a web application for real-time data analysis
- Demonstrated the ability to apply my technical knowledge in a business setting

Jul 2014 – Mar 2015 — iOS Game Developer at Gooii Ltd
- Built and ported iOS apps for a variety of touch devices
- Worked on 2D video games and a news feed style app using the iOS SDK

Education

2016 - Present — **Imperial College London**, MSci Mathematics

Specialising in statistics and analysis

3rd Year: Expected high first class – cumulative total **79%**

2nd Year: First class **81%**, top 15% of the year group

1st Year: First class **73%**

Module Choices

Time Series	Statistical Modelling 2	Markov Processes
Stochastic Simualtion	Algebraic Combinatorics	Probability
Statistical Theory	Measure and Integration	

2014 - 2016 — **The Priory Academy LSST**, A-Levels

Mathematics A*, Further Mathematics A*, Physics A, STEP 3 Grade 1

Awards

August 2018 — **Second Year Project Prize**, Winton Capital Management
Awarded to the members of the best second year group project team.

June 2017 — **Hackathon Innovation in Technology Award**, Amazon Alexa, BP
For the application of image recognition models and voice activated technology to improve safety in high risk environments.

August 2016 — **Excellence in Mathematics Trophy**, The Priory Academy LSST
Awarded to the student that has performed most outstandingly in Mathematics

Technical Skills

Data and Machine Learning

- Strong background in **data modelling** with applications for analysis and prediction
- Implemented and deployed **neural networks** and **genetic algorithms** (**TensorFlow** and **Keras**)
- Produced **data analysis reports** for competitions and third party projects
- Experienced with **Python** along with **Pandas** and **SciPy**

Software Development

- Experienced web developer using **Node.js**, **React** and **Nginx** as well as **PHP** and **MySQL**
- Used cloud computing services from **AWS** and **Google Cloud**
- Fluent in **Javascript**, **Python**, **C++**, **Java** and **fast at adopting** other languages

Other

- Fast at understanding and applying mathematically dense academic papers
- Proficient with Adobe Creative Suite, Microsoft Office, Latex, Git and Bash shell

Recent Projects

Understanding Dropout in Deep Neural Networks
Formally analysed the effects of dropout regularisation in neural networks with the aim of understanding why it works well and how we can make it better. Currently compiling my results into a paper. Supervised by Dr Christopher Hallsworth and Dr David C Stenning from the Statistics department at Imperial.

Sonodot Dashboard
Led the development of a large-scale web application that processed and stored large volumes of data and delivered real-time insights via a web dashboard. Had to take responsibility for a project that had great impact on Sonodot's users and learnt a lot about managing long-term group projects.

Undergraduate Colloquium
Gave a lecture on the mathematics behind deep neural networks and some of the research that's currently taking place to understand why they work so well. Learnt a great deal about communicating technical concepts and public speaking.

Recent Hackathons
AI Hack – Performed a time series analysis on road accident data, produced a report and presentation communicating findings.
IC Hack 18 – Worked with a team to produce a web app that allows the visually impaired to experience photo albums with audio. We came 2nd for Accenture's Hack for Good Award.
BP Imperial – Applied CNNs and voice activated technology to improve safety in high risk environments. We won the Innovation in Technology Award.

Personal Interests

Musical Performance and Composition
Trained and performing jazz drummer; playing in Imperial College Big Band and with several smaller bands. Help to run a bi-weekly jam at Imperial/Royal College of Music. Compose and produce music with peers. Attending a part-time Music technology course.

Maker Communities
Partake in multiple group coding projects with friends and open source communities. Attend coding and data science hackathons regularly.

Imperial College Live Music Society
Committee member; help to run music and social events; maintain the practice room and recording studio.