Patrick Tesh

1 Temple Fortune Lane – London NW11 7UB
07769 321 902 • patrick_tesh@outlook.com

Education

University of Edinburgh **Edinburgh**
MSc Artificial Intelligence *2016–2017*

University of Oxford **Oxford**
MMath Mathematics (2:1) *2011–2015*

University College School **London**
A–levels: *Maths (A*), Further Maths (A*), Physics (A*), Chemistry (A).* *1998–2010*
GCSEs: 10 A*s inc. Maths and English.

Experience

BMLL Technologies **London**
Data Scientist *September 2015 – August 2016*
I implemented algorithms for parsing and normalising financial datasets and rebuilding the limit order book. I helped build our back-end systems for ingesting and handling large volumes of data, using Python, AWS and PostgreSQL. I also worked on developing a quantitative pricing model for valuing limit order book data, written in MATLAB. I produced technical, academic-style reports using LaTeX detailing my models and met with financial exchanges and platform partners to communicate my work.

St Catherine's College JCR **Oxford**
Treasurer *June 2013–June 2014*
I was responsible for managing the accounts of the college's student union. I liaised with the college administration on financial matters affecting students, such as annual rent changes and the cost of college facilities. I worked effectively as part of the JCR committee to reach decisions on sometimes controversial issues. I also gained experience chairing some fortnightly student body meetings, managing the discussion of, and voting on, student-proposed motions.

QED Analytics **London**
Researcher *July 2013–September 2013*
I worked with several other students on a research project developing tools for machine facial recognition, as part of a broad Biometric Identification package to complement a previously created iris scanning system. I developed my knowledge of MATLAB as well as an appreciation of elementary machine learning techniques. I also compiled a detailed summary of our results, describing our methods and the mathematics behind them.

Freelance Tutor **London**
Tutor *2011–2012*
I tutored A-level students in Mathematics and Statistics. I worked mostly with students who had lost motivation following disappointing exam results and I learned to tailor my approach to boost confidence as well as improve skills.

Berida Wool Company **NSW Australia**
Farmhand *February 2011–May 2011*

I spent three months during the lambing season on a sheep station in New South Wales, Australia. I worked as the junior member in a team of three on a 3,500 acre farm running 2000 sheep and 200 cattle. This involved dealing with lambing, planting next year's crops, building a new woolshed, renovating farm buildings and working on farm machinery. I learned organisation and teamwork, as well as land management and maintenance.

Skills and Interests

Programming:

- Python – 1 year
- MATLAB – 3 years

I have used Python, MATLAB and LaTeX professionally. I have experience working in a Linux environment, and some beginner BASH scripting skills. I have some amateur experience using Java and XML in personal projects developing simple applications for the Android operating system. I have an entry-level understanding of HTML5 and web development with Python, as well as intermediate knowledge of Microsoft Excel acquired through my experience as a student union treasurer.
GitHub: https://github.com/PaddyT

Software Development: I have experience working in an agile environment using SCRUM, and with continuous delivery. I have used tools such as JIRA, Git, and Jenkins to plan, build and deploy software. I have experience with cloud computing using Amazon Web Services and the Boto3 API to handle large datasets. I have experience managing databases and database migrations using PostgreSQL and Python.

Academic: As an undergraduate my academic interests are focused on probability theory and statistics. In my third year, I completed courses in Information Theory, Stochastic Calculus and Financial Modelling among others. I also completed a 10,000 word project investigating, both analytically and computationally, mechanisms for spontaneous pattern formation in nature. This project required self-motivation and initiative as I sought out contemporary research to support my work. I both enjoyed and excelled at this style of work, and ultimately received a first class grade for the project. In my final year, I studied subjects including Optimization, Machine Learning, Monte Carlo simulation and Data Mining. I also wrote a dissertation on deep learning models in natural language processing, and their use in natural language inference tasks, which received a first class grade. I am now undertaking an MSc in Artificial Intelligence, in which I hope to further pursue my interests in NLP.

Music: I play the trumpet and the bass guitar. At university I played in a student jazz band, which put on regular concerts as well as playing for parties and drinks receptions around Oxford. I also played in an alternative band in sixth form. We rehearsed several hours every week, wrote our own music, and performed in pubs and clubs around North London as well as at college events. I learned to work closely in a creative team and to present to an audience with confidence and style.

Sport: I played hockey for my school's 1st XI, and played regularly at collegiate level at university and for my local hockey club. I also enjoy rowing, climbing, running and endurance sports. I was a member of the Oxford University Mountaineering Club and in 2009 I took part in an ultra-marathon across the Peak District.