Thomas J. Delaney, PhD

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Ballyboggan Lower ⋄ Castlebridge

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EDUCATION

University of Bristol   *Sept 2016 - July 2020*
PhD in Computer Science
Specialising in computational neuroscience.
Thesis: 'Investigating, implementing, and creating methods for analysing large neuronal ensembles'
Focussed on dynamic modelling of calcium fluoresence, and statistical modelling of activity in neuronal ensembles,
Multiple conference presentations, and a work in progress for publication

University of Edinburgh   *Sept 2014 - Sept 2015*
MSc in Informatics
Thesis in 'How informative are retinal ganglion cell responses about visual stimuli?'
Modules included: Neural Computation, Machine Learning & Pattern Recognition, Reinforcement Learning, Neural Information Processing, etc.

Overall Result: Distinction

Trinity College, Dublin   *Sept 2007 - June 2011*
B.A. in Mathematics
Including two years of Theoretical Physics
Final Year Project on Quantum Topos Theory
Poster Project entitled 'Biomechanics of Human Motion'
Modules included: Mathematical Neuroscience, Introduction to Information Theory, Functional Analysis, etc.

Overall Result: 1.1

EXPERIENCE

University of Bristol   Sept 2016 - Present
Teaching Assistant   *Bristol, England*

· Teaching Assistant for Computer Science and Engineering Mathematics undergraduate and MSc courses:

  ○ Applied Statistics, 3rd year & MSc course, $2018 - 2020$, ~ 80 students.

  ○ Machine Learning, 3rd year & MSc course, 2019, ~ 300 students.

  ○ Data Structures & Algorithms, 2nd year course, 2019, ~ 200 students.

  ○ Algorithms, 1st year course, 2018, ~ 200 students.

· Marking for undergraduate courses:

  ○ Algorithms, 1st year course, 2018, ~ 200 students.

  ○ Computational Neuroscience, 3rd year & MSc course, $2018 - 2019$, ~ 300 students.

· Prepared workshop for prospective computer science students on university open day.

University of Bristol   January 2017 - Present
Chief Examination Invigilator   *Bristol, England*

· Supervised ~ 50 exam rooms.
· Includes exam rooms for a single student and for up to 800 students.
· Responsible for set-up, role taking, reportage of malpractice, safe transport of exam scripts and papers.

CheckRisk   June 2018 - September 2018
Research Internship   *Bath, England*

· Internship at financial risk assessment company.
· Researched cutting-edge forecasting methods including statistical, machine learning and hybrid methods, including recurrent neural networks.
· Applied these methods to financial data to evaluate domain suitability.

Edinburgh Airport Ltd.   Jan 2016 - Aug 2016
Data Engineer   *Edinburgh, Scotland*

· Worked as a key member of the Airport's Digital team with a mandate to change every interaction with the airport using technology, data and innovation.
· Main responsibility involved taking in data available from around the business and extracting insights quickly and at low cost.
· Worked with teams such as Commercial, Security, Airfield, Forecasting and Planning to extract, transform and load data, making these datasets useful for these teams, and Edinburgh Airport's senior management.

First Derivatives. Plc   June 2011 - Aug 2014
Consultant Software Engineer   *Newry, Ireland*

· Worked as a software engineer on in-house projects, and as a consultant for different financial companies and institutions.
· Four months as kdb+ consultant in Morgan Stanley New York offices, working on the creation and upkeep of a large historical and real-time financial database.
· Four months as kdb+ consultant and team leader in off-shore development centre for Morgan Stanley.
· Seventeen months as kdb+ consultant in a highly responsible role in the London based hedge fund Marshall Wace Asset Management.
· Final three months in team-leader role utilising in-house software for performance reporting on First Derivatives FX trading platform.

TECHNICAL STRENGTHS

Computer Languages	Python, Julia, Matlab, Bash, q/kdb+, Java, c++, Batch Scripting, LaTeX
Protocols & APIs	FIX messaging protocol, Geneos monitoring API
Databases	kdb+, MySQL
Tools	git, SVN, Vim, crontab, Autosys, Eclipse, Scoop for Parallel Processing

SCHOLARSHIPS

Bristol PhD studentship, funded by the EPSRC
University of Edinburgh Informatics UK/EU Master's Scholarship 2014/2015
Exempt from Senior Freshman Mathematics Final Exams by virtue of Trinity Foundation Scholarship exam results.