Aaron Stockdill

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Education

2017–2020   *In progress*
Doctor of Philosophy
University of Cambridge, UK.
Computer Science. Thesis: "Automating representation change across domains for reasoning".

2016
Bachelor of Science with First Class Honours
University of Canterbury, NZ, GPA 8.9 of 9.
Computer Science. Report titled "Neuromorphic Computing with Reservoir Neural Networks on Memristive Hardware".

2013–2015
Bachelor of Science
University of Canterbury, NZ, GPA 8.83 of 9.
Computer Science and Mathematics.

Publications

2019
Inspection and Selection of Representations
Daniel Raggi, Aaron Stockdill, Mateja Jamnik, Grecia Garcia Garcia, Holly E. A. Sutherland, and Peter C.-H. Cheng, Intelligent Computer Mathematics.
`https://dx.doi.org/10.1007/978-3-030-23250-4_16`

2017
Simulating neuromorphic reservoir computing: Abstract feed-forward hardware models
Aaron Stockdill and Kourosh Neshatian, 2017 International Conference on Image and Vision Computing New Zealand (IVCNZ).
`https://dx.doi.org/10.1109/IVCNZ.2017.8402482`

2016
Restricted Echo State Networks
Aaron Stockdill and Kourosh Neshatian, AI 2016: Advances in Artificial Intelligence: 29th Australasian Joint Conference, Hobart, TAS, Australia, December 5-8, 2016, Proceedings.
`https://dx.doi.org/10.1007/978-3-319-50127-7_49`

Employment

2017–2020
Supervisor, *University of Cambridge, UK*.
Algorithms, Artificial Intelligence, Foundations of Computer Science, Interaction Design, Logic and Proof, Prolog.

2017
Lecturer, *University of Canterbury, NZ*.
Introduction to Computer Science.

2015–2017
Tutor, *University of Canterbury, NZ*.
Introduction to Computer Programming, Introduction to Computer Science, Algorithms, Introduction to Computer Networks and the Internet, Artificial Intelligence.

2014–2015
Software Developer Intern, *ARANZ Geo Leapfrog*.
Developing Geological Modelling software for the mining industry as a summer internship to get experience at an established software company.

2014–2017
Founder, Web Designer, Programmer, *Potato Softworks*.
Founded this web design company, lead web designer, software developer.

Personal Skills

Communication
Most of my work has been in education, where communication to both large groups and individuals is vital. I have strong conflict-resolution skills. I am a native English speaker, have a functional level of French (approximately B1), and am a German beginner (A2).

Organisation
I am an organised person, as evidenced by pursuing higher education and starting my own company. Both teaching and my extra-curricular work require extensive planning, while a PhD is an exercise in resource management.

Leadership

I ran a company, am responsible for many students, and have organised and run events for MathSoc at the University of Canterbury. I was on the MCR committee for Selwyn College. I am willing to take charge, with the commitment and skills to see a project through to completion at a high standard.

Diligence

As a PhD student, I must complete a long-term project with shifting goals. The research is novel, and requires planning, resource management, motivation, and perseverance to bring to conclusion.

Technical Skills

Concepts

My research focus is artificial intelligence, and I have a deep theoretical knowledge of algorithms and complexity. In mathematics, my focus was graph theory, algebraic structures, and linear algebra.

Languages

Python, Standard ML, HTML/CSS/JavaScript, C, and LaTeX. Working knowledge of APL, C++, Fortran, Haskell, Lisp, and PHP. These are sufficiently diverse that I can learn others quickly.

Tools

Confident on the command line, frequently working on remote servers through SSH. I have worked with Docker. Comfortable with VCS: Git, Mercurial, and Subversion. My day-to-day editor is Emacs, on macOS. I am comfortable in Linux and Windows.

Awards & Honours

2017
Hamilton Cambridge International Scholarship
Cambridge Trust, University of Cambridge.
Full scholarship to study towards my PhD at the University of Cambridge.

2016
Graduating BSc(Hons) Computer Science Student of the Year
University of Canterbury.
Awarded for academic achievement throughout my undergraduate and honours study.

2016
G B Battersby Trimble Scholarship in Computer Science
University of Canterbury.
Awarded for academic merit, broad knowledge outside of computer science, and research of benefit to New Zealand.

2016
UC Senior Scholarship
University of Canterbury, for academic merit from 200 and 300 level courses.

2015
Allied Telesis Labs Scholarship in Computer Science
University of Canterbury.

Extra-Curricular

2018–2020
STIMULUS Volunteer, *University of Cambridge*.
Helping a Computer Science class in a local sixth form college.

2019
AI Research Group Lunchtime Seminar, *University of Cambridge, UK*.
Presented a snapshot of my PhD work to staff and graduate students in the Computer Laboratory.

2019
Selwyn Postgraduate Seminar, *University of Cambridge, UK*.
Presented a summary of my PhD work to fellows and graduate students of Selwyn College.

2018
Graduate Symposium, *Diagrams 2018 Conference*.
Presented a poster and talk, received feedback from an academic mentor.

2018
Selwyn College MCR, *University of Cambridge, UK*.
Served as the computing officer, helped run events, and acted as a mentor to new graduate students.

2016
Back to School Speaker, *University of Canterbury, NZ*.
Invited to speak about my university experience to final year students at Cashmere High School on behalf of the University of Canterbury.

2015–2016
Scholarship Calculus Tutor, *Cashmere High School, NZ*.
Developed and ran the Scholarship Calculus programme for advanced Year 13 students. In 2016 my students received a record four scholarships.