Aaron Stockdill

aaronstockdill@me.com ∘ *https://aaron.stockdill.nz/*

Education

2017 – 2020
In progress
Doctor of Philosophy
University of Cambridge.
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.
Major in 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.
Major in Computer Science and Mathematics.

2010 – 2012
National Certificate of Educational Achievement (NCEA)
Cashmere High School, Excellence Endorsement.
Awarded up to NCEA Level 3, all levels endorsed with Excellence.

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*.
"Foundations of Computer Science", "Prolog", "Logic and Proof", "Artificial Intelligence", "Algorithms", "Interaction Design".

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.
2014 – 2016	**Mathematics Tutor**, *NumberWorks'nWords*.
	Taught students of all school ages, specialising in high school level algebra and calculus.
2012 – 2017	**Mathematics Tutor**, *Private*.
	Provided in-home mathematics tutoring for high school students, teaching all levels from Years 9 to 13 / Forms 3 to 7.
2012 – 2014	**Dick Smith Electronics**, *Salesperson*.
	Responsible for sales, stock handling, conflict resolution, and store openings and closings.

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 sophisticated 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 poorly-defined 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, HTML/CSS/JavaScript, Standard ML, C, Fortran, and LaTeX. Working knowledge of Lisp, C^{++}, Haskell, 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 **Summer Research Scholarship**
Department of Physics and Astronomy, University of Canterbury.
To continue my Honours research throughout the summer 2016–2017 break.

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 **Finalist for the Sir Paul Callaghan Eureka Award**
Eureka Trust, for innovation and STEM communication.

2016 **Freemasons University Scholarship**
For academic merit, community involvement, and leadership potential.

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

2015 **Graduating BSc Computer Science Student of the Year**
University of Canterbury.
Awarded for academic achievement throughout my undergraduate study.

2015 **Page Memorial Prize**
University of Canterbury, for academic achievement in Level 300 Mathematics.

2015 **Summer Research Scholarship**
Australian National University.
Fully-funded research project at the ANU over the 2015-2016 summer break.

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

2015 **Mathematics and Statistics Scholarship**
University of Canterbury, Tier I.

2014 **Member of the Golden Key International Honour Society**
University of Canterbury.

2014 **Mathematics and Statistics Scholarship**
University of Canterbury, Tier II.

2013 **Dean's Congratulations**
University of Canterbury.
Received in recognition of Academic Achievement from Associate Professor Catherine Moran, Dean of Science.

2013 **Peter Bryant Memorial Prize**
University of Canterbury.
Awarded for First Place in 100-Level Mathematics.

2013 **Entrance Scholarship**
University of Canterbury.
Awarded based on achieving Excellence at Level 2 and Level 3 in NCEA.

2012 **Computer Science High Achievers Scholarship**
University of Canterbury.
Awarded to high achieving students commencing a degree in Computer Science in 2013.

2012 **Proxime Accessit**
Cashmere High School.

2012 **Fraser and Tonkin Scholarship**
Cashmere High School.
Awarded for Excellence in Mathematics and Sciences.

2012 **First Place in Subject**
Cashmere High School.
Calculus (Awarded 2011), Physics, Statistics, Digital Technologies.

Extra-Curricular

2019 **Selwyn Postgraduate Seminar**, *University of Cambridge*.
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*.
Served as the computing officer, helped run events, and acted as a mentor to new graduate students.

2018 **STIMULUS Volunteer**, *University of Cambridge*.
Helping out in a local high school with Computer Science subjects.

2016 **Back to School Speaker**, *University of Canterbury*.
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*.
Developed and ran the Scholarship Calculus programme for advanced Year 13 students. In 2016 my students received a record four scholarships.

2015 **COSC362 Class Representative**, *University of Canterbury*.
Served as class representative for COSC362: Data and Network Security, a position that works as a mediator between students and staff to resolve any issues.

2014–2016 **Member of MathSoc UC**, *University of Canterbury*.
Member of the Mathematics Society, on the committee in 2015 and 2016. Involved in tutorials, and developed and ran a LaTeX workshop for Mathematics, Computer Science, and Physics students.

2014–2016 **Member of CompSoc UC**, *University of Canterbury*.
Member of the Computer Society, on the committee in 2016. Attending and running events, and helping out with tutorials.