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.

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, 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.

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 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

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

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

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.

2015

COSC362 Class Representative, *University of Canterbury, NZ*.
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, NZ*.
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, NZ*.
Member of the Computer Society, on the committee in 2016. Attending and running events, and helping out with tutorials.