

Connor Mattson

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I am a third-year student studying a BE(Hons) in Engineering Science / BSc in Computer Science at the University of Auckland. I am interested in Software/Web Development, Data Science, Operations Research, and financial applications of mathematics/computing such as Quantitative Analysis.

Computers were introduced to me as a tool for people to use to make their lives easier. Looking into how computers do this, I began to search for other ways to simplify tasks. Eventually this led me to Engineering Science, a degree that focuses on developing mathematical models to minimise costs, maximise efficiency, and simulate outcomes to make the best possible decision.

Technical Skills

Python, JavaScript, Git, HTML, CSS, MATLAB, VBA, Java, C, C#, R

Education

BE(Hons) in Engineering Science / BSc in Computer Science, University of Auckland (2020)
4 x Certificate of Outstanding Achievement from HoD of Computer Science (2017 and 2018)

NCEA Level 3 With Excellence, Saint Kentigern College (2016)

Proxime Accessit to the Dux (2016)

Saint Kentigern Scholarship (2016)

Headmaster's Award for contribution and service to the college and community (2016)

Top Academic's award (2015)

First in class – Computer Science (2013, 2014, 2015 and 2016)

Young Scholars Programme, University of Auckland (March 2016 – June 2016)

Cisco Certified Network Associate (CCNA) - Routing and Switching (2015)

Relevant Personal Projects

A partial list of projects that I've worked on can be found at connormattson.github.io/projects, or on my GitHub: github.com/connormattson. I'm happy to discuss any of my past work.

Miscellaneous Scripts and Challenge Solutions

I love solving programming challenges or puzzles and competing in programming competitions. I keep a record of solutions and I'm working on documenting these and building them into a database. The majority of these solutions are written in **Python**.

Stock-Calc

A quantitative analysis tool which takes in data about a given security and generates random forests. The forests are used for predicting whether the closing price of that security will increase or decrease the following day. Stock-Calc is built in **C** and **R**, as well as utilising some **Python**.

Shielded

A prototype end-to-end encrypted messaging app demonstrating the ease at which standard such as OpenPGP can be implemented. The client and server – as well as all the interactions between the two – were written in **Python** (not the language I'd choose if I were to remake Shielded today).

Tyred – Summer of Tech Create Camp 2018

Simulating software development in a professional environment, Create Camp was a two-day hackathon in which teams were challenged to create apps that make use of New Zealand API. Using **HTML**, **CSS**, and **JavaScript**, my team created, Tyred, which finds the most energy efficient route between two addresses. We were awarded prizes for the most hurdles overcome and the best collaboration.

Work Experience

Software Engineer Intern

December 2018 - present

Rocket Lab Limited, Auckland

Developed **Python** applications for production automation. One such application reduced the time required for a particular post-stack/launch analysis by a factor of 12 as well as simplifying it so a developer's presence is not required. Another application streamlined several production processes and tests, this was deployed company wide. Since February, I am now a permanent employee.

Student Bootcamp Wrangler

March 2019 – present

New Zealand Technology Training Trust (Summer of Tech), Auckland

Raised awareness of Summer of Tech by speaking about the programme and handing out fliers. Assisted with the running of events via sign-ins at the door and making sure speakers had everything they needed. Wrote blog posts about each event, summarising important points.

Project Manager and Collaborator

January 2018 - present

Project Make, Auckland

Initially I worked with the founder of Project Make to establish standard processes and communication protocol. I developed a guideline for structuring how the company would engage with collaborators. As an ongoing collaborator I write sections of course material and present/teach at workshops.

Freelance Digital Designer and Developer

July 2014 – November 2018

Self-Employed

Periodically I take on freelance projects. One of the larger projects I worked on was a digital, architectural model for the Waiheke Island Treehouse Retreat; this involved modelling several distinct buildings and their interconnecting walkways.

Part-time Teaching Aide

February 2017 - November 2017

Saint Kentigern College, Auckland

Supported students as they worked through examples of code, introducing them to basic application and website development. Later, as they created projects of their own I helped them systematically break problems down into steps and with general troubleshooting.

Robotics instructor

December 2013 - January 2014

Parnell Trust, Auckland

Assisted with running a holiday program for children between 8 and 13 years old, introducing them to basic robotics and programming via a drag and drop interface.

Achievements

2017: 4th in the New Zealand Programming Contest (Tertiary Intermediate category)

2016: 10th in the New Zealand Programming Contest (School category)

2015: 4th in the New Zealand Junior Robocup (Premiere category)

2014: 2nd in the New Zealand Junior Robocup (Premiere category)

2013: 1st in the New Zealand Junior Robocup (Senior category)

A+ Programming Techniques (**Java**)

A+ Modelling in Operations Research

A Introduction to Engineering

Computation (**MATLAB** and **C**)

A Discrete Structures in Mathematics
and Computer Science

A+ Computer Science Fundamentals (**Python**)

A- Algorithms and Data Structures

A Computational Techniques and Computer
Systems (**Python**)

Memberships

2019 - 2019

Developers Society

Executive Team

2016 - 2016

Design Council

Founding Chairman

2016 - 2016

Scholars Group

Member

2014 - 2016

Python Programming Club

Student in Charge

2014 - 2015

Cisco Networking Academy

Student in Charge

2013 - 2015

Robotics Club

Student in Charge

2013 - 2015

Students in IT

Volunteer