

# Connor Mattson

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I am a second-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

Git, HTML, CSS, JavaScript, Python, VBA, MATLAB, Java, R, C, x86 Assembly, 3D Modelling, Adobe Premiere, After Effects, Illustrator, and Photoshop.

## Education

**BE(Hons) in Engineering Science / BSc in Computer Science**, University of Auckland (2021)  
3 x Certificate of Outstanding Achievement from HoD of Computer Science (2017 and 2018)

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

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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](https://connormattson.github.io/projects), or on my GitHub: [github.com/connormattson](https://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.

### 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. 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

### Freelance Digital Designer and Developer Self-Employed

July 2014 - present

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.

### Project Manager and Collaborator Project Make, Auckland

January 2018 - present

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.

### Part-time Teaching Aide Saint Kentigern College, Auckland

February 2017 - November 2017

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 Parnell Trust, Auckland

December 2013 - January 2014

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: 4<sup>th</sup> in the New Zealand Programming Contest (Tertiary Intermediate category)

2016: 10<sup>th</sup> in the New Zealand Programming Contest (School category)

2015: 4<sup>th</sup> in the New Zealand Junior Robocup (Premiere category)

2014: 2<sup>nd</sup> in the New Zealand Junior Robocup (Premiere category)

2013: 1<sup>st</sup> in the New Zealand Junior Robocup (Senior category)

A+	Programming Techniques ( <b>Java</b> )	A+	Computer Science Fundamentals ( <b>Python</b> )
A+	Modelling in Operations Research	A-	Algorithms and Data Structures
A	Introduction to Engineering Computation ( <b>MATLAB</b> and <b>C</b> )	A	Computational Techniques and Computer Systems ( <b>Python</b> )

## Memberships

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