

Mark Metcalfe

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markmetcalfe



<https://markmetcalfe.io>

I'm a third year Computer Science and History student, who loves solving real-world problems using code. I've always had an analytical mind, and I love the complex yet solveable challenges that software can present. Whether it be something new like an alarm clock to help wake me up, or improving TradeMe's rental search, I'm always looking to improve the lives of other people and myself through code. I think my proactive, analytical attitude would be a perfect fit for your team.

EXPERIENCE

Summer of Tech Create Camp

Agile Development

25-26 August 2018



markmetcalfe/FlatFive

This year I participated in Summer of Tech's Create Camp. Over one weekend, I formed a team with three other developers and one designer to create an app completely from scratch. During the Create Camp we:

- ▶ Discussed and planned the idea of our app and performed market research.
- ▶ Designed what our app would look like and modelled different user journeys and made user experience decisions based on them.
- ▶ Developed our app using the Kanban Agile method, splitting up tasks and ordering them by priority in order to achieve a minimum viable product.
- ▶ Frequently had stand-ups where we and our scrum master communicated on our progress so far.
- ▶ Tested and then presented our app to a judge's panel and a large audience.

OraTaiao: New Zealand Climate & Health Council Full Stack Web Development

July 2018



markmetcalfe/
SubmissionsForm

I developed a full stack NodeJS + React website under a casual contract for a doctor's organisation. It allowed a user to create and customise a PDF that would be sent to the Ministry for Environment via email. In this work I performed:

- ▶ Rapid development with ever changing requirements.
- ▶ Design and development of a product to be used by hundreds of people.
- ▶ Setting up and maintaining an AWS server, with Nginx and MySQL.
- ▶ Use of Google Analytics, Facebook Analytics, and SQL to gain valuable insights and information to be used in a future app.

University Group Project Game Development

September-October 2017



markmetcalfe/SWEN222-
Group-Project

As part of a university course, I co-developed a game with four other students. It was a time-intensive and challenging process, developing completely from scratch. Our game was a complex application, which demonstrated advanced skills such as:

- ▶ Advanced use of the Java language, as I actively used lambdas, streams, polymorphism, event handlers, and the AWT library for creating a GUI.
- ▶ Advanced implementation of software patterns such as the Model-View-Controller, Strategy, State, Composite, Adapter and Façade patterns.
- ▶ I also implemented an Abstract Syntax Tree from scratch, using knowledge I had learnt from a previous course. It read complex level data from a file.

Domino's Pizza Wellington Pizza Delivery Driver

April-June 2017

I made and delivered food for Domino's Pizza. In this role I gained these skills:


- ▶ Interpersonal and communication skills from interacting with customers and my co-workers, both in person and over the phone.
- ▶ Critical thinking, patience and cool-headedness from resolving customer's complaints.
- ▶ Quick thinking and situational awareness, from analysing the state of the kitchen to decide which task should be completed next.

EXPERIENCE (CONTINUED)

Personal Project: I developed a website that controls the lightbulb that sits in my bedside lamp, in order to help me wake up in the mornings, operating as a sunrise alarm clock.
'Light Control'

Internet of Things Project


May-June 2016

 markmetcalfe/LightControl

- ▶ By wiring different components to the GPIO on the Raspberry Pi's board, I gained basic electrical engineering experience.
- ▶ By turning button clicks on a website to infrared output using WebSockets, Node.js and Python, I developed a full stack from scratch.
- ▶ I designed an aesthetically pleasing and easy to use online interface that dynamically updates the front end when the back-end data changes.

Personal Project: 'Beep!'
Android Development

December 2016

 markmetcalfe/BeepMirrors

I developed an app that played a user-specified tone to remind the user to check their mirrors while driving.

- ▶ I created a product with a logo and brand identity, designed specifically with the end user in mind.
- ▶ The software that I created myself that resulted in real-world life improvements, as it helped me attain my driver's licence.
- ▶ I used Java, and Android's many built in APIs, specifically the accelerometer for detecting when the car had turned a corner.

SKILLS

Communication

I've enjoyed having to explain and justify my thinking at different stages of development. Whether it be to my tech-savvy team mates, or administrators in my organisation, I have the ability to clearly describe what I am doing and what I wish to achieve.

JavaScript

Every project I have worked on outside of university has required the use of JavaScript in one form or another. It is a fundamental part of front end development, and I have used Node.js, React, Angular and jQuery in projects with much success.

Server Management

I maintain two web servers, one an AWS server for my organisation, and a Raspberry Pi server that resides at home. I access both of these with SSH and send commands remotely to configure and update software and configurations, whether it be changing some settings in Nginx, or deploying the latest version of master. I also use bash scripts to automate some processes.

Other Skills

I also have experience using MySQL, mongoDB, PHP, Gulp and Bash scripting. This experience stems from the projects, or other small one-off projects, which I did in order to broaden my knowledge.

EDUCATION

Victoria University

March 2016 onwards

Current undergraduate third-year BSc student in Computer Science and in History, respectively. I currently have a B grade average.

Wellington High School

2011-2015

NCEA Level 1, 2 & 3, with Excellence and Merit endorsements in History and English.

REFERENCES

Dr Alex Macmillan

Co-convenor of OraTaiao: The New Zealand Climate & Health Council
[Click here for a written reference](#)

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