Curtiss Rollinson

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Personal Statement

A fourth-year Computer-Systems Engineering student with a passion for programming and the latest technology. Looking to further myself and my engineering skillset with a focus on software and hardware development.

Education and Qualifications

BE(Hons) in Computer Systems Engineering, University of Auckland, *2017 – Present*

- *UoA Engineering Deans List 2018*

NCEA Level 3 with Excellence, Long Bay College, *2016*

Skills

Programming Languages: C, C++, C# / .NET, Java, JavaScript, MATLAB, Python, VHDL

Software: Altium, Visual Studio, Postman, Quartus, LTspice, Atmel Studio, Linux, Git

Hardware: Arduino, PSoC, Atmel Microcontrollers, FPGA

Projects

Maze Solving Robot (C)

- Developed software and sensing hardware to allow a robot to navigate a maze using the optimal path.
- Implemented hardware-software interface, between various components such as PWM, light sensing, BT module.
- Created and implemented algorithm for converting coordinate path to robot instructions.

CHIP-8 Emulator (C++)

- Used knowledge of low-level computer systems to create a working emulation of the CHIP-8 instruction set.
- GUI implemented with SDL2.

Power Load Management System(C/FreeRTOS)

- Used FreeRTOS on the NIOS II platform to create a load management system with real time constraints.

Power Meter with Wireless Data Transmission (C, AVR)

- Focus on implementation of power calculation routines in C from ADC readings.
- Transmission of data over UART protocol.

Video Game Development (Java)

- Created a top-down shooter using Swing libraries and MVC design pattern.
- Implemented Tiled xml level-editor parsing for custom level design.

Peer-to-Peer Social Media Network (Python)

- Developed a p2p social media network using CherryPy based webserver and PyNaCl for encryption.
- HTML/Bootstrap/JavaScript for client interface.
- Database using SQLite.

Work History

2019-Present, **Software Development Intern,** Sandfield, Ponsonby
- Working on full stack development of in-house server monitoring portal using .NET and JavaScript.
- Working with Amazon DynamoDB for exception log and notification storage.
- Use of Postman for API testing and validation.
- Created a high-level library for interfacing with the AWS SDK for DynamoDB. queries.
- Implemented search page with advanced filtering features.

2019, **Lego Robotics Teacher**, Bricks4Kidz, North Shore schools
- After-school class, teaching children aged 5-11 Lego models relating to various real-world topics, such as renewable energy.
- Teaching basic programming skill using drag and drop app.
- Demonstrated strong communication skills, delivering course material and working with children on their projects.

2016-2018, **Charter Boat Cleaning, Maintenance and Crew**, Amada Cruises, Auckland Viaduct
- Interior and exterior cleaning before and after charter cruises.

2015, **Pamphlet Delivery**, Fairfax Media, Torbay
- Distribution of advertisements to local area

Personal Interests/Activities

- Video Games
- Programming
- Building PCs
- Hobbyist Electronics/Arduino

Personal Qualities

- Excellent communication skills, verbal and written
- Team player
- Hard-working and motivated
- Passionate about technology