MATTHEW YONG

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SUMMARY

Final year Master of Electrical Engineering student with proven experience in developing web applications, electronics and embedded systems. Seeking positions involving software or IoT development.

EDUCATION

University of Melbourne, Melbourne   July 2018 - November 2020
Masters of Engineering, Electrical Engineering.

University of Melbourne, Melbourne   July 2015 - July 2018
Bachelor of Science, Bio-engineering-Systems.

Coursework: Data Structures & Algorithms, Object Oriented Design, Cloud Computing. Embedded Systems, Computer Networking, Control Systems, Signal Processing, Circuit Design, Probability.

WORK EXPERIENCE

8DGE Solutions   December 2019 - February 2020
Engineer Intern

- Developed a smart gas detection IoT system that tracks gas concentrations over the web.
- Presented a proof of concept presentation to solve gas detection issues with industry clients.
- Designed a web interface to display live gas values using Express.js and HighCharts.js
- **Worked With**: C/C++, ESP32 board, Express.js, HighCharts.js, Radio Frequency, LoRa.

University of Melbourne   July 2019 - August 2019
Research Assistant

- Worked on improving a spatially adaptive photographic system, using LEDs for shadow correction.
- Integrated camera program with sensors by developing a TCP socket server on C and Python.
- Designed multi-threaded programs in Python, reducing program execution time by 30%.
- **Worked With**: Linux, Raspberry Pi, C++, Python, I2C, Git, TCP Socket Programming.

PROJECTS

Online C Web Editor and Compiler — (Application Link, GitHub Link)

- Developed a full stack web application, allowing users to edit and compile C code online.
- Implemented a RESTful and object oriented based web server using C++ and POCO Libraries.
- Designed front end user interface with HTML, CSS, Javascript and Twitter Bootstrap.
- **Utilized**: C++, AWS, Git, HTML, CSS, Javascript, Bootstrap, RESTAPIs, JSON.

IoT Digital Signal Oscilloscope — (GitHub Link), (Video Demo)

- Developed a digital oscilloscope with external IoT upgrade and a responsive web application.
- Simulated, designed and programmed embedded system using Altium Designer and embedded C.
- **Utilized**: IoT, Altium Designer, Atmel Studio, Express.js, jQuery, RESTAPIs, ESP8266 Chip.

Twitter Analytics Cloud Project — (Application Link, GitHub Link)

- Worked in a group of five to design a scalable social media analytics cloud cluster system.
- Created scripts to auto deploy system onto Linux cloud instances using Ansible and Bash Scripting.
- **Utilized**: Ansible, SSH, Bash, Linux, Git, CouchDB, Docker, Apache2, ZenHub.