MATTHEW YONG

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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, Bionengineering-Systems.

Software Coursework: Data Structures & Algorithms, Object Oriented Design, Cloud Computing.
Electrical Coursework: Embedded Systems, Circuits, Control Systems, Signal Processing.

PROJECTS

SinsOnTwitter Cloud Project - (Link to Application, GitHub Link)

- Integrated the web application, database and tweet harvester into a three node cluster system.
- Handled cloud resources such as managing volumes and security groups.
- Developed auto deployment scripts for cloud provisioning and system setup using Ansible.
- Implemented a three node CouchDB database system using Docker containers and bash scripts.
- **Utilized**: Ansible, Cloud, Bash, Linux, Git, CouchDB, Docker, Apache2, cluster, scalability.

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

- Designed RESTful and OOP based backend C++ server with POCO C++ Libraries.
- Designed front end user interface with HTML, CSS and Javascript Bootstrap.
- Deployed application onto an AWS Windows instance.
- **Utilized**: C++, Poco C++, Git, HTML, CSS, Javascript, Bootstrap, RESTAPIs, JSON, AWS.

Embedded Electronic Game Console - (GitHub Link)

- Implemented LCD to micro-controller bit communication with bit bashing through SPI protocol.
- Designed battery level detection with ADC and screen brightness control with PWM.
- Used micro-controller interrupts to create an event driven program.
- Designed PCB board on Altium including wire routing and component placement.
- **Utilized**: C, SPI, PWM, PCB design, JTAG, soldering, Altium.

Social Media Community App - (GitHub Link)

- Developed a React Native based app allowing for small christian group management.
- Implemented data pulling/pushing with FireBase using the fetch API.
- **Utilized**: React Native, Expo, Firebase, mobile development.

WORK EXPERIENCE

University of Melbourne - Research Assistant
Jan 2018 - Feb 2018

- Proposed mechanical solutions for current robot design that reduced material costs of about 20%.
- Designed mechanical parts using Computer Aided Design Software (SolidWorks).
- Collaborated & communicated with supervisors for feedback on designs.

EXTRA-CURRICULAR

- Represented Victoria in the Under-22 Ultimate Frisbee State Championships in 2017.
- Represented Melbourne University's Ultimate Frisbee Team for Uni Games since 2015.