

# MATTHEW YONG

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## EDUCATION

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**University of Melbourne, Melbourne**  
Masters of Engineering, Electrical Engineering.

July 2018 - November 2020

**University of Melbourne, Melbourne**  
Bachelor of Science, Bionengineering-Systems.

July 2015 - July 2018

**Coursework:** Data Structures & Algorithms, Object Oriented Design, Cloud Computing. Embedded Systems, Communication Networks, Control Systems, Signal Processing, Circuits.

## PROJECTS

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

- Developed scripts using Ansible for cloud provisioning & system setup to easily scale system.
- Managed cloud resources on Linux based cloud instances using SSH and Bash.
- Deployed web application on a three node cluster system using Apache2, Docker and modwsgi.
- **Utilized:** Ansible, SSH, 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 EC2 AWS Windows instance.
- **Utilized:** C++, Poco C++, Git, HTML, CSS, Javascript, Bootstrap, RESTAPIs, JSON, AWS.

### IoT Greenhouse Management System - (Link to Application, GitHub Link)

- Developed real time sensor communication with Ajax calls on Express backend.
- Designed responsive front-end user interface using Materialize CSS Framework.
- Configured real time data plots using Chart.js.
- Deployed web application onto an EC2 AWS Linux instance.
- **Utilized:** Ajax, Materialize, Chart.js, Express, CouchDB, RESTAPIs, ESP8266 WiFi Module.

### Interactive Personal Website - (Link to Website, GitHub Link)

- Designed an interactive & responsive site to learn front end web development.
- Implemented responsive layouts using Bootstrap, JQuery and Materialize CSS.
- Created interactive item animations using animate.css and waypoints.
- **Utilized:** HTML, CSS, Javascript, Bootstrap, Materialize, waypoints, animate.css, flexbox.

## WORK EXPERIENCE

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**University of Melbourne - Research Assistant**  
July 2019 - August 2019

### Project : Spatially Adaptive Photographic System

- Integrated communication between Python and C++ modules using TCP sockets.
- Developed multi-threaded programs using Python's multiprocessing library.
- Configured Linux systemd files to automate program execution on RaspberryPi.
- Restructured system code, reducing tight coupling between program modules.
- **Utilized:** Raspberry Pi, C++, Python, I2C, Git, Linux, Socket Programming, Multi-Processing.

## **University of Melbourne - Research Assistant**

Jan 2018 - Feb 2018

### **Project : EMU Upper Limb Rehabilitation Robot**

- Proposed mechanical solutions for current robot design, reducing material costs to about 20%.
- Taught myself Computer Aided Software Design on SolidWorks.
- Collaborated & communicated with supervisors for feedback on designs.

### **EXTRA-CURRICULAR**

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