

Education

The University of Western Australia, Perth
B.Sc. Software Engineering and Computer Science

February 2015 to July 2018
GPA: 6.75/7.0 WAM: 81.75%

Technical Skills & Interests

Languages (Proficient/Preferred): Java and Python

- **(Experienced):** C and Matlab
- **(Familiar):** R, and JavaScript

Libraries: OpenMP and OpenMPI

Web: Django, HTML, CSS, & Bootstrap

General: Git, Heroku, and AWS

Electronics: Arduino and Raspberry Pi

Interested in **Artificial Intelligence, Electronics, Hockey, Teaching, and Problem Solving**

Work Experience

BHP – Software Engineer (March 2018 – Present)

- Working in a team to develop a cloud-based (AWS) multi-platform web app, using a *Django* backend with REST-ful API endpoints, and a *React* frontend. I am also responsible for integrating the monitoring software written in my internship, into the application's pipeline.

BHP – Technology Intern (Nov 2017 – Feb 2018)

- Implemented auto-generated dashboards in the CI pipeline to monitor web apps, and aiming to reduce downtime by alerting administrators of faults and high network loads. (*Python, Grafana, & AWS API's*)
- Prototyped a 3D maintenance planner using *Three.js* to improve on the 2D planner.
- Automated front-end testing on web apps to find bugs, and ensure test cases were met. (*Selenium WebDriver*)

Projects

Moss-side Whist – (Java)

- Researched and implemented an AI agent that finished 2nd in a cohort-wide Whist competition. It uses an Information Set Monte Carlo Tree Search Algorithm to make strategic and optimal decisions.

Bitcoin – (Java)

- A simplified version of the Bitcoin protocol allowing for the secure transfer of currency between users connected in an encrypted Point-to-Point network, and uses a customisable Proof of Work, as well as verifying the Merkle Root and transaction signatures.

Activities

Bloom – Head of IT (Volunteer) (July 2017 – Pres.)

- Responsible for maintaining hardware such as IoT devices running, as well as integrating between services and automating tasks, to ensure a fun and productive workspace for young entrepreneurs.
- Modified TV's in the collaborative working space to show inspirational quotes, profiles of members currently using WiFi in the space, and upcoming events being run by Bloom. (*Raspberry Pi, Python*)

Fishackathon – (February 2018) (*Django, Google Maps, and React*)

- Competed in a team of 5 and won the Perth competition of a global hackathon aimed at reducing environmental issues caused by illegal and/or unsustainable fishing practices worldwide.
- Prototyped a Django web app aimed at informing both recreational and commercial fishermen of the laws, licenses, and equipment they can use based on their location, and the time of the year.

Western Australia Capture the Flag – (December 2017)

- Competed in a pair against experienced members of the cyber-security community, to solve a series of challenges which covered a range of common techniques, exploits, and tools, finishing 10th out of 45.

Guild Volunteering – Volunteer Developer - (*Django, Heroku*)

- Volunteered to help create an electronic log system to replace the original paper-based system, with the aim to reduce UWA's carbon footprint, and to automate data entry of student's volunteered hours.