Samuel Heath

Education

The University of Western Australia, Perth **February 2015 to July 2018**
B.Sc. Software Engineering and Computer Science **GPA:** 6.75/7.0 **WAM:** 81.75%

Technical Skills & Interests

Languages (Experienced): Java
Languages (Familiar): C, Python, Matlab, R, & JavaScript
Libraries: OpenMP, OpenMPI
Web: Django, HTML, CSS, & Bootstrap
General: Git, Heroku, AWS, Arduino, & Raspberry Pi

Interests include **Artificial Intelligence**, **Electronics**, **Gyming**, **Engineering**, **Space**, 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 this applications 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*, and *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*)

Bloom – *IT Officer* (July 2017 – Pres.)

- Responsible for maintaining hardware such as AP's and IoT devices running, as well as integrating between services and automating tasks, to ensure a productive workspace for young entrepreneurs.
- Used a TV 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*)

Projects

Moss-side Whist – (Java)

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

Bitcoin – (*Java*)

- A simplified version of the Bitcoin protocol which allows for the secure transfer of currency between users connected in an encrypted Point-to-Point network.
- Has a customisable Proof of Work, as well as calculating and verifying the Merkle Root of transactions, and transaction signatures to keep the wallet up to date.

Guild Log System - (*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.

Activities

Fishackathon – (Feburary 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.

National Youth Week Hackathon – (April 2017) (*Django, Bootstrap, and Google Maps*)

- Three others and I built a Django web app to aggregate information about free services available to homeless youth in Perth, including their locations which we plotted using Google Maps.