Samuel Heath

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Education

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

Technical Skills

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

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 automated monitoring of the application using software written in my internship.

BHP – *Technology Intern* (Nov 2017 – Feb 2018)

- Automated application monitoring by auto-generating dashboards on release, that aim to reduce downtime by alerting admins of errors, and high network and memory loads. (*Python*, *Grafana*, and *AWS* API's)
- Prototyped a 3D maintenance planner to reduce downtime, and improve on the 2D planner. (*Three.js)*
- Automated front-end testing on a web app to find bugs, and speed up testing. (*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 (Course Project) – (Java)

- Researched and implemented an Agent which uses an Information Set Monte Carlo Tree Search (IS-MCTS) Algorithm to play a modified version of Whist. All agents competed in a cohort wide competition with my agent finishing 2nd.

Bitcoin (Course Project) – (*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 (Volunteer Dec. 2016 - May 2017) - (*Django, Heroku)*

- Created an electronic log system to replace the original paper-based system, it is intended to reduce UWA's carbon footprint as well as automate data entry of volunteered hours to UWA student records.

Activities

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

- Competed in a global hackathon aimed at reducing environmental issues caused by illegal and/or unsustainable fishing practices worldwide. Our team of 5 won the Perth competition.
- Prototyped a web app with a REST-ful API aimed at informing both recreational and commercial fishermen of the laws they must obey based on their location.

Western Australia Capture the Flag – (December 2017)

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

National Youth Week Hackathon – *Anglicare* (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.