Samuel Heath

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Education

The University of Western Australia, Perth B.Sc. Software Engineering and Computer Science	**Start:** Feb 2015 **Finish:** July 2018 **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 multi-platform web app using a Django backend with REST-ful API endpoints, and a React frontend.

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 down-time, 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 managing IT infrastructure such as switches, AP's and IoT devices in the Bloom Labs.
- Built a MagicMirror to display inspirational quotes in the collaborative working space, using a custom web scraper to extract quotes from relevant websites. (*Raspberry Pi, Python*)

Projects

Moss-side Whist (Course Project) – (Java)
- Implemented an IS-Monte Carlo Tree Search Agent to play a modified version of Whist to compete in a cohort wide competition, finishing 3rd.

Bitcoin (Course Project) – (*Java*)
- A simplified version of the Bitcoin protocol which allows for the secure transfer of currency between users connected via SSL in a Point-to-Point network.
- Uses a customised Proof of Work difficulty, calculates and verifies the Merkle Root of transactions, and verifies transaction signatures, keeping 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, intended to reduce UWA's footprint as well as automating 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 covering a range of common techniques, exploits, and tools. Finished 10th out of 45.

National Youth Week Hackathon – *Anglicare* (April 2017) - (*Django, Bootstrap, and Google Maps*)
- Over a weekend built a web app to aggregate free services available to homeless youth in Perth, plotting them on a map to increase usability.