Luke Davis

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EDUCATION

March 2012 – November 2015

Bachelor of Science (Software Engineering, Computer Science)

University of Western Australia

WORK EXPERIENCE

January 2022 – present

Programmer

OzGrav research group

- Designing and implementing the CI/CD iterative development system.
- Containerise build system to use Docker/Apptainer and write deploy scripts / bash functions to utilise this in HPC environments .
- Refining pipeline critical path to lower latency.
- Implemented pipeline artifact analysis framework.

October 2018 – present

Software Engineer

Elemint

- Architected and managed the operations and continuous integration of the systems development life cycle.
- Managed cloud services for provisioning of computational and storage resources.
- Designed and administrated production databases.
- Developed full stack applications for AI model deployment and inference.
- Planned and constructed multiple on-premises CI/CD and GPU compute servers.
- Refactored legacy ML models and systems to modern frameworks (for ongoing R&D).

April – October 2018

Technical Consultant

Lateral Capital Ventures

- Performed market research and codebase analysis on software start-up companies.
- Developed Web3 connected asset swapping interface.
- Developed a high availability market maker and liquidity provider agent.

SKILLS

Fields Systems Administration, Cloud Computing, Database Design and Management, Parallel Computing, DevOps Automation, Computer Vision, Machine Learning.

Programming Lanugages Python, Javascript, C++/C, SQL, Bash, Ruby, Solidity, Kotlin, Java, HTML.

Frameworks and Libraries Pytorch, Node.js, Redis, Gstreamer, Flask, FastAPI, Vue.js, Slurm, HTCondor, Ruby on Rails, WinAPI.

Developer Tools Linux, git, Docker/Apptainer, Kubernetes, Jupyter, VSCode, geth, GitlabCI/Jenkins, Systemd, WSL.

Productivity Tools Microsoft 365, Google Workspace, LaTeX.

Cloud Microsoft Azure, Amazon AWS.

PERSONAL PROJECTS

Public Timetable scheduling with Particle Swarm Optimisation, written in C++ and parallelised with OpenMP.

Android app for user-friendly usage of Shamir's Secret Sharing algorithm, written in Kotlin.

Hearthstone simulator and agent using the Monte Carlo Tree Search algorithm, written in C++ with a WinAPI GUI.

Private Cryptocurrency exchange arbitrageur (over 1000 BTC traded).