

David Sha

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EXPERIENCE

Amazon Web Services (AWS)

Sydney, NSW

Software Development Engineer Intern

Dec. 2024 – Feb. 2025

- Developed a new internal Operations Console feature reducing operator's production issue RCA time by 15 minutes per incident (20-30 incidents/day); also unblocking legacy console deprecation.
- Delivered an efficient solution to scanning log messages for a high-availability internal service, by enabling long polling and caching of CloudWatch Log Insights queries.
- Integrated CloudWatch service to two existing internal services using GraphQL, AWS SDKs and Coral models.

Sincidium

Melbourne, VIC

Associate Software Engineer

Jan. 2024 – Jul. 2024

- Reduced Docker image sizes for frontend and backend services, achieving a total size 1/8th of its original size.
- Introduced Docker BuildKit's multi-stage builds, leading to 10× speedup in build times.
- Proposed and implemented company-wide policy on linters and formatters (ESLint, Black, isort, Flake8, mypy).

Software Engineer Intern

Sep. 2023 – Jan. 2024

- Introduced a new CI pipeline in GitHub repository to automate backend API tests using pytest.
- Led the design and implementation of a Next.js dashboard to support the flagship product.

The Joinary

Melbourne, VIC

Developer

June 2021 – June 2024

- Synchronised customer order data between 3 SaaS tools using Zapier for a large manufacturing client.
- Integrated two platforms for Lüp using Python and AWS Lambda syncing over 5000+ participants over two years.
- Implemented a business workflow from ideation for Hero HQ which has since been used daily for over 3 years.

PROJECTS

Scheduler Web Application ([Link](#)) | Fullstack, TypeScript, FastAPI, Vite, Docker

June 2024 – Present

- Active maintainer of a growing open source task management solution with 30+ stars on GitHub.
- Implemented a CI/CD pipeline for automated testing and deployment utilising self-hosted runners, reducing manual overhead and ensuring code stability across releases.
- Maintained a comprehensive backlog of tasks using GitHub Projects, facilitating clear project direction.

Home Lab | Kubernetes, Docker, Linux, Proxmox, Restic, Rclone

Feb. 2021 – Present

- Created a home lab to self-host a number of apps i.e. password manager, file hosting, VPN server.
- Implemented 3-2-1 backup strategy using Backblaze B2, restic, rclone and a Raspberry Pi.
- Migrated frequently-used services from Docker to Kubernetes using Helm charts for scalability concerns.

Certified Expert at n8n | Python, JavaScript, YouTube, Oracle Cloud, AWS

Aug. 2022 – Apr. 2024

- Created content (tutorials) for the official n8n YouTube channel amassing 1.5k+ views per week per video.
- Managed 3 n8n instances through both AWS EC2 and Oracle Cloud – 2 instances still actively in use.
- Developed custom n8n node for a client leading to 200+ user downloads from npm registry in total.

Remote Procedure Call Framework ([Link](#)) | C, GNU make, Valgrind

Apr. 2023 – May 2023

- Designed and implemented an API, enabling function execution on a remote server.
- Implemented serialisation/deserialisation of a nested data structure, crucial for protocol communication.
- Utilised Valgrind memcheck to detect and resolve all memory leaks from the client and server.

EDUCATION

The University of Melbourne

Melbourne, VIC

Master of Information Technology in Artificial Intelligence

Feb. 2024 – Nov. 2025

The University of Melbourne

Melbourne, VIC

Bachelor of Science in Computing and Software Systems

Feb. 2021 – Nov. 2023

TECHNICAL SKILLS

Languages: Python, C, Java, Kotlin, JavaScript/TypeScript, Haskell/Prolog

Frameworks: FastAPI, Next.js, TailwindCSS

Developer Tools: Kubernetes, Docker, React, Git, GNU make, Valgrind, AWS, Oracle Cloud, n8n, Restic