# **David Sha**

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#### **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

## **EXPERIENCE**

#### Amazon Web Services (AWS)

Sydney, NSW

Software Development Engineer

Apr. 2025 – Present

• So good they wanted me back immediately. Working with Rust and Java now, and building with TypeScript React.

Software Development Engineer Intern

Dec. 2024 - Feb. 2025

- Developed a new feature in the internal console, providing better visibility to EC2 instances and reducing operator's production issue RCA time from 15 minutes to 1 minute per incident (20-30 incidents/day).
- 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.

Sindy Labs Melbourne, VIC

Founding 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  $10\times$  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 an 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.

# 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