

# RILEY WEBB

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📍 Melbourne, Australia

## EDUCATION

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**Royal Melbourne Institute of Technology** Melbourne, Australia  
*Associate Degree in Engineering and Technology (Aerospace Engineering)* *Feb 2025 – Nov 2026*  
*Bachelor of Engineering (Aerospace Engineering)* *Feb 2027 – Nov 2028*

## SKILLS

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**Languages:** C, C#, Python, JavaScript, HTML, CSS, Bash, Lua, VB  
**Technologies:** Git, Docker, AWS, Azure, Kubernetes, OpenCV, OpenGL, OpenCL, Vulkan, TensorFlow, Jira  
**Applications:** JetBrains Suite, Solidworks (inc. CFD), Fusion 360, MATLAB, LaTeX

## EXPERIENCE

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**Family Tree Health** Melbourne, Australia  
*Software Developer & Web Administrator (Freelance)* *Jan 2023 – Present, Casual*

- Directly manage the web presence for Family Tree Health and Vital Child Education, overseeing full-site redesigns to improve user experience and brand alignment.
- Develop and maintain custom textbfWordPress environments, utilising PHP, HTML5, and CSS3 to implement custom functionality and responsive layouts tailored to business requirements.
- Coordinate directly with stakeholders to translate business requirements into technical features, managing the end-to-end deployment of new content and services.

**Carsales.com.au** Melbourne, Australia  
*Work Experience – DevOps Engineer* *Sept 2022*

- Gained professional exposure to high-scale cloud infrastructure at one of Australia’s leading tech companies, focusing on modern DevOps and Site Reliability Engineering (SRE) practices.
- Utilised **Terraform** to design and test deployment-ready Infrastructure-as-Code (IaC) templates for automated provisioning of cloud resources.
- Developed hands-on experience managing and monitoring **AWS** server instances, ensuring resource availability and observing production-grade security protocols.
- Embedded within a cross-functional engineering team using the Atlassian Suite (Jira, Confluence) and **Agile methodologies**, actively participating in daily stand-ups, sprint planning, and collaborative technical reviews.
- Collaborated on the development of CI/CD workflows using **GitHub Actions**, gaining insight into automated testing and deployment cycles.

**House Husbands (Nine Network)** Melbourne, Australia  
*Series Regular Actor (Character: Zac)* *Apr 2012 – Apr 2017*

- Portrayed a lead character across five seasons of a Logie Award-winning national drama, maintaining a high level of performance and consistency.
- Collaborated effectively with large production teams, directors, and adult co-stars in a high-pressure, fast-paced professional environment.
- Demonstrated exceptional time management and discipline by balancing rigorous filming schedules and ”call times” with educational requirements.
- Developed strong communication skills and the ability to pivot quickly based on real-time feedback and script revisions.

## AWARDS & ACHIEVEMENTS

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**University Results:** Received 3 High Distinctions and 4 Distinctions in 2025

## PROJECTS

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### **cNES (High-Performance NES Emulator)** | *C, Vulkan, SDL3, LLVM*

- Architected a high-throughput NES emulation engine in C using **SDL3** and a **Vulkan** backend, leveraging **GPU compute shaders** for frame composition and post-processing visuals.
- Developed a highly optimised **6502 CPU interpreter** featuring a custom **Just-In-Time (JIT) compiler** backend to achieve near-native execution speeds on modern hardware.
- Engineered a low-latency memory pipeline to optimise **CPU-to-GPU data transfers**, utilising Vulkan's memory management to minimise bus congestion and increase performance.
- Built a modular **C-based plugin API** and **ImGui** frontend, allowing for real-time memory hooking; utilised this to interface a **Neural Network** for autonomous gameplay in Super Mario Bros.
- Integrated an instrumentation-based **performance profiler** to identify and eliminate bottlenecks within the emulated PPU and CPU execution loops.

### **PTV Real-Time Tracker** | *JavaScript, Node.js, GitHub Pages, PTV API*

- Developed a **full-stack** transit dashboard providing real-time tracking for Victoria's entire train, tram, and bus network using the Public Transport Victoria (PTV) Timetable API.
- Engineered a high-throughput data pipeline to process and compress 800 MB of **GTFS** static data twice daily, optimising it for fast retrieval on a static-hosted frontend.
- Architected a custom proxy server to manage **API authentication** and bypass CORS limitations, ensuring secure and seamless communication between the client and Victorian Government data servers.
- Designed a modern, responsive UI that performs asynchronous polling every 30 seconds to provide live vehicle offsets and platform departures with minimal latency.

## REFERENCES

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Darren Squires (Vice Principal @ Eltham High School) – Provided on request

Paul Chamberlain (Family Tree Health) – Provided on request