DAN NICHOLLS

AI Software Engineer

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WHO AM I?

I'm an AI Software Engineer working in the Computer Vision space, with a strong interest in object detection, tracking, and media streaming (RTSP, WebRTC, etc.). I enjoy building fast, efficient systems and working close to real-world data.

KEY SKILLS

Languages	Go, Python, Javascript
Frameworks	Deepstream, GStreamer, ONNX, PyTorch
Eventing	Kafka, Flink, RabbitMQ
Automation	GitHub Actions, Azure Pipelines
Deployment	Docker, Azure, AWS
OS	Linux, Ubuntu, Arch, Nix

EXPERIENCE

AI Software Engineer — TRU Recognition   Feb 2022 – Mar 2025

- Led a small AI engineering team to build and deploy a scalable inferencing system using NVIDIA DeepStream and Triton, supporting secure, hardware-aware deployments for both cloud and on-premise use cases.
- Managed runtime optimization of object detection models (YOLO, ResNet, CNN) by configuring Triton repositories and tuning performance for real-world tracking in security and retail environments.
- Built and standardized CI/CD pipelines across ~20 microservices using Azure DevOps, increasing deployment reliability and visibility while reducing failure diagnosis time through automated testing and tracking.
- Introduced and led Agile practices across the tech department, running sprint ceremonies, managing cross-functional workflows, and aligning engineering output with sales and product objectives.
- Directed the successful integration of a custom API in partnership with a major telecommunications client, enabling seamless and secure device communication across distributed networks.

Web Developer — Coco Ruby Plastic Surgery   Aug 2016 – Feb 2022

- Built and maintained production websites for multiple surgeons using WordPress, React, and JavaScript, with the goal of improving user experience and increasing brand reach.
- Improved site performance by optimizing load speed and mobile responsiveness for better accessibility and engagement.
- Implemented SEO strategies with tools like Yoast and Google Analytics to improve search visibility and drive traffic through targeted keyword trends.

Electronics Engineer Intern — Eco Built Systems   Jun 2018 – Jul 2018

- Revised technical documentation and resolved hardware issues for a hydroponics lighting system, improving installation reliability and clarity for end users.
- Contributed to the design and build of a custom 3D printer, focusing on firmware setup and electronic component troubleshooting during prototyping.
- *Completed as a part of the Swinburne Global Internship Program.*

EDUCATION

Bachelor of Engineering (Electronics & Computer Systems) (Honors)   2015 – 2021
Swinburne University of Technology

Bachelor of Computer Science   2015 – 2021
Swinburne University of Technology

PROJECTS

Project Sourdough
A Go-based ordering system built for friends and family to streamline sourdough orders. Uses clean backend architecture with HTMX, Alpine.js, and Templ for a minimal frontend.

MediaMTX Contributor
Contributed to the open-source MediaMTX media server by resolving issues, supporting users, and submitting minor bug fixes and improvements.

REFERENCES

All references to be supplied upon request.