Taylor **Tang**

MACHINE LEARNING ENGINEER · CONSULTANT

Brisbane, QLD, Australia

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"Better to run than curse the road"

Summary

Machine Learning Engineer with 3+ years of experience developing end-to-end AI solutions across computer vision, NLP, and AI safety domains. Proven track record building scalable ML systems from research to production deployment, with expertise spanning satellite imagery analysis, LLM integration, and automated testing pipelines.

Proficient in Python, PyTorch, YOLO, Transformers, and cloud platforms (AWS, Azure), with hands-on experience in model optimization and data pipeline engineering. Demonstrated success delivering high-impact solutions for government and enterprise clients, including national policy-supporting researches.Known for rapid learning, bridging research innovation with production implementation, and delivering robust solutions that drive measurable business outcomes.

Work Experience

Machine Learning Consultant
AT KJR

Brisbane, Australia
Aug. 2024 - Present

- Consulting with clients from various backgrounds, proposing AI-driven solutions and leveraging AI-driven tools to accelerate development.
- Delivering commercial level end-to-end ML pipelines—including data processing, orchestration, modeling, and continuous deployment.
- Engaging in latest AI research, staying up-to-date with the latest advancements in AI and applying them to business problems.

Machine Learning Engineer
AS FREELANCER

Remote
Jan. 2024 - Aug. 2024

- Consulted with clients to understand their AI needs and provided tailored AI-driven solutions to enhance their business operations.
- Leveraged major cloud providers including AWS and Azure to deliver efficient and scalable prototype applications.
- Embedded various LLM providers including OpenAI and Anthropic APIs to deliver AI-driven solutions.

Machine Learning Engineer Intern
AT VISION HQ

Brisbane, Australia
Dec. 2022 - Dec. 2023

- Learned to deliver end-to-end computer vision solution pipelines, including data processing, model training, and deployment.
- Exposed to cloud-based solution development using GCP, and learned to deploy models into production systems, ensuring robust performance and scalability.
- Experienced CI/CD pipeline, Agile software development, and Scrum methodologies in a production environment.

Project Highlight

AI Agents Red Team Testing
AT KJR

Brisbane, Australia
Jun. 2025 – Jul. 2025

- Led red team testing of commercial AI agentic framework for enterprise client, evaluating agent behavior across **15 attack vectors** to ensure secure deployment.
- Designed automated testing pipeline using Promptfoo and LLM APIs to generate adversarial prompts and systematically probe agent vulnerabilities.
- Executed **5,000+ test cases** identifying critical safety issues, delivering actionable feedback that enabled secure framework release.
- **Tech Stack:** Python, Promptfoo, Claude, OpenAI

Australia Age Assurance Technology Trial – Testing Platform
AT KJR

Brisbane, Australia
Mar. 2025 – Jun. 2025

- Contributed to Australia's **nationally-funded** Age Assurance Technology Trial, evaluating 53 technology providers supporting the world's first under-16 social media ban.
- Built scalable test framework integrating diverse age verification APIs with real-time data collection and comprehensive analytics.
- Facilitated testing with **1,100+ participants** across demographic groups, processing evaluation data that informed government policy on child online safety.
- **Tech Stack:** React, TypeScript, Node.js (Express), PostgreSQL, AWS

Feral Animal Detection System – UAV Thermal Imagery

Brisbane, Australia

AT KJR

Aug. 2024 – Mar. 2025

- Led end-to-end computer vision pipeline for local government wildlife management, processing **200+ hours** of UAV thermal footage across diverse landscapes.
- Built and optimized YOLOv8 models through 300+ iterations, improving accuracy from **59% to 82% mAP@0.5** on 7,000+ annotated thermal images.
- Deployed production system reducing wildlife survey time from days to hours while maintaining expert-level accuracy.
- **Tech Stack:** Python, YOLOv8, CVAT, FiftyOne, ClearML, UAV thermal imagery

Road Safety Monitoring System – Dash-cam Computer Vision

Brisbane, Australia

AT VISION HQ

Jan. 2023 - Dec. 2023

- Developed computer vision system for government infrastructure management, processing dash-cam footage across Brisbane to detect **12 hazard categories**.
- Built and trained YOLOv5 models on **10,000+ annotated images**, implementing ensemble model for reliable small object detection.
- Deployed production system reducing pothole repair lifecycle by **30%** and eliminating manual surveyor costs across municipal networks.
- **Tech Stack:** Python, YOLOv5, OpenCV, PyTorch, GCP

National Bushfire Analysis Using Satellite Imagery

Melbourne, Australia

AT THE UNIVERSITY OF MELBOURNE

Aug. 2023 – Nov. 2023

- Led research supporting Australia's National Bushfire Management Policy, building custom dataset with **90+ days** of satellite coverage and 1,094 annotated segmentation samples.
- Enhanced SegFormer architecture to process **13-band multi-spectral** data, achieving F1-score of **88%** and outperforming RGB baseline by 3%.
- Published full paper and presented at **IEEE eScience 2024** conference, benchmarking CNN vs. Transformer approaches for bushfire damage assessment.
- **Tech Stack:** Python, PyTorch, SegFormer, Satellite APIs, Remote Sensing, Multi-Spectral Processing

Honors & Awards

2023	**Dean's Honours List**, The University of Melbourne	*Melbourne, Australia*
2022	**Dean's Honours List**, The University of Melbourne	*Melbourne, Australia*
2022	**Scholarship**, The University of Melbourne	*Melbourne, Australia*
2022	**2nd place**, Dota2 - Australia Esports League University	*Melbourne, Australia*
2019	**Above & Beyond New Employee**, Turner & Townsend	*Brisbane, Australia*
2019	**Community Volunteer**, Yalari Education Event	*Brisbane, Australia*
2019	**Community Volunteer**, Yalari Indigenous Children	*Brisbane, Australia*
2018	**Vice Chancellor's List**, Bond University	*Gold Coast, Australia*
2018	**Dean's Honours List**, Bond University	*Gold Coast, Australia*
2017	**Vice Chancellor's List**, Bond University	*Gold Coast, Australia*
2017	**Dean's Honours List**, Bond University	*Gold Coast, Australia*

Certificates

2024	**Foundation Tester**, International Software Testing Qualifications Board (ISTQB)
2024	**Developer Associate**, Azure
2024	**AI Engineer Associate**, Azure
2023	**Cloud Practitioner**, Amazon Web Services (AWS)

Education

The University of Melbourne

Melbourne, Australia

MASTER OF IT (AI MAJOR) AT FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY (FEIT)

Jan. 2022 - Nov. 2023

- WAM: 83/100, Graduate with Distinction

Bond University

Gold Coast, Australia

MASTER OF CONSTRUCTION PRACTICE

Jan. 2017 - Nov. 2018

- GPA: 6.7/7.0, Graduate with Distinction

Griffith University

Brisbane, Australia

BACHELOR OF BUSINESS MANAGEMENT (TOURISM & HOSPITALITY MAJOR)

Oct. 2012 - Nov. 2014