

Gurwinder Singh

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PROFESSIONAL SUMMARY

Software engineer graduating June 2026 with First Class Honours (WAM ~80.9) from Deakin University. I moved to Melbourne in 2024 and taught myself to build production AI systems while studying and working — a transformer model from scratch in NumPy, a ROS-based autonomous robot, and an AI chatbot integrated with live public transit data. I've since built production systems professionally: resume classification, automated job matching, and rule-based eligibility engines using Python, FastAPI, and the Anthropic Claude API, with a solid foundation in Java, JavaScript, and object-oriented design. I'm looking for a full-time graduate or junior role in software engineering or applied AI/ML.

EDUCATION

Bachelor of Software Engineering (Honours)

Completed June 2026

Deakin University, Melbourne — First Class Honours, WAM: 80.9. Minor: Artificial Intelligence and Machine Learning. Deakin International Meritorious Scholarship (25%).

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C++

Databases & APIs: SQL, Firebase, REST API design & integration, Postman (API testing/documentation), FastAPI

Backend & Tooling: FastAPI, REST APIs, Git/GitHub, VPS Deployment, Agile Development, Apify

AI / Agentic Systems: Anthropic Claude API, LLM Orchestration, Machine Learning, Reinforcement Learning, NLP

Other Technologies: ROS, MQTT, Firebase, AWS (concepts)

Soft Skills: Team Leadership, Stakeholder Management, Problem Solving, Communication

EXPERIENCE

AI Engineer (Contract) — Jobeyze Limited

June 2026 – Aug 2026

- Build AI-powered resume classification, job matching, and PR pathway assessment systems using Python, FastAPI, and the Anthropic Claude API
- Designed a deterministic PR eligibility rule engine combined with Claude-narrated recommendations, turning complex immigration rules into clear, explainable outputs
- Built and tested REST API integrations (validated with Postman) and automated job-scraping pipelines using Apify to keep job-matching data current
- Deployed and maintained services on a VPS, and built an automated rule-monitoring system with human-approval gating to safely track regulatory changes

Capstone Project Lead — AI Transport Assistant Chatbot — Chameleon, Deakin University

Mar 2025 – Aug 2025

- Built an AI-powered transit assistant chatbot as sole technical lead, owning architecture through deployment
- Designed and trained NLP intent classifiers using Rasa and Python; integrated live GTFS government transit feeds and REST API endpoints (tested via Postman) for real-time schedule data, delay alerts, and station lookups
- Handled multi-turn conversational flows and edge-case query handling
- Delivered end-to-end: architecture, model training, API integration, and deployment

Website & Digital Support Assistant (Part-Time) — Pawstralia & Kangaroo Bed, Melbourne

Oct 2025 – Present

- Maintain and improve e-commerce websites, managing product listings, pricing, and UI changes, with SQL-backed product and order data
- Designed and built a "Customised Bundles" feature using JavaScript to improve customer experience and increase average order value
- Used AI-generated imagery to create product photography for e-commerce listings, cutting photoshoot costs and enabling rapid content updates without physical production constraints

Software Development Assistant — Technopedia Solutions

Sep 2023 – Dec 2023

- Built Android application features using Java, applying OOP principles in a professional codebase
- Integrated external APIs (tested and documented with Postman) and worked alongside senior developers in an Agile team environment

- Supervise and coordinate teams of 4–6 staff in fast-paced service environments
- Demonstrate adaptability and leadership under pressure during peak operational periods

PROJECTS

AgroSense — AgroTech IoT Monitoring Platform

- Designed an end-to-end IoT system using MQTT, Firebase, and SQL for real-time environmental monitoring and data storage
- Built data visualisation dashboards and REST API endpoints (tested in Postman), improving data flow efficiency through system-level design decisions

Custom Transformer Model for NLP

- Built a transformer architecture from scratch using Python and NumPy — implemented embeddings, positional encoding, and multi-head attention with no ML framework dependencies
- Achieved 78% F1 score on named entity recognition; strong demonstration of low-level ML and OOP design skills

Duckiebot Autonomous Navigation System

- Developed a ROS-based autonomous navigation system in Python with sensor integration, control logic, and stop-sign detection
- Designed using modular, object-oriented architecture to separate perception, planning, and actuation layers

The Storyteller — Indigenous Board Game Digitisation (Capstone Project)

- Led a cross-functional team of 12 developers to digitise an Indigenous educational board game into a multi-platform product (PC, iPad, Web)
- Worked directly with stakeholders and product owners to translate requirements into functional software features across Agile sprint cycles
- Managed a shared GitHub workflow, tracking 40+ commits and coordinating parallel development streams

HONOURS RESEARCH

Human-Aligned Multi-Objective Reinforcement Learning — Supervised by Professor Richard Dazeley, Deakin University 2025 – 2026

- Researched how AI agents balance competing objectives using reinforcement learning techniques
- Explored how large language models can guide decision-making in complex, constrained environments
- Focused on aligning AI behaviour with human preferences — combining rigorous ML methodology with practical system design

LEADERSHIP & INVOLVEMENT

- Mentor — Capstone Development Students, Deakin University
- Member — Engineers Australia

References available upon request