

MILAN SHAJI

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PROFILE

Final-year QUT student completing a dual degree in Data Science and Business (Entrepreneurship & Innovation), graduating late 2026. Strong technical base across Python, SQL, machine learning and data pipeline work, paired with a business degree that keeps the focus on what the output needs to deliver, not just whether the model performs. Targeting graduate roles in data, analytics and AI that turn data into decisions the business can act on. Available from early 2027, open to relocation, Australian citizen.

EDUCATION

Queensland University of Technology (QUT), Brisbane 2022 – 2026
Bachelor of Data Science | Bachelor of Business (Entrepreneurship & Innovation)

- Expected graduation late 2026; both degrees studied concurrently.
- Awarded a Distinction for the IAB303 Business Intelligence capstone (detailed below).
- Relevant coursework: Machine Learning, Business Intelligence, Applied Statistical Methods, Data Science Capstone.

KEY SKILLS

Data, AI & Analytics: Python (Pandas, NumPy, scikit-learn, PyTorch), SQL, R, machine learning and deep learning, computer vision (MediaPipe), LLM integration and evaluation (Claude API), statistical modelling, data pipeline design, ETL (extract, transform, load).

Visualisation & BI: Power BI, Tableau, Teradata, TouchDesigner (real-time interactive visuals), dashboard design, data storytelling for non-technical audiences.

Delivery & Impact: Requirements analysis, data quality and validation, technical documentation, business case writing, project delivery.

Tools & Infrastructure: AWS (S3, EC2), Git, Jupyter, Linux.

Communication: Presenting technical work to non-technical stakeholders and clients, written reporting, team collaboration.

PROJECTS

Market Pulse — Live Market Dashboard & Self-Validating Trading Engine github.com/milanshaji1/market-pulse 2026

- Built a full-stack live market terminal (Node.js, vanilla JavaScript, one runtime dependency) that screens roughly 1,550 US stocks and the top 50 cryptocurrencies every 60 seconds, aggregating six free no-key data sources into a transparent 1–5 rating and entry-timing engine where every score decomposes into its trend, momentum, quality, valuation and risk inputs.
- Engineered backtesting and forward paper-trading engines (60 automated tests, test-driven, including look-ahead-bias guards that prove a decision at day t cannot see day $t+1$) to validate the signals against ten years of history and a live S&P 500 benchmark.
- Caught and fixed three bugs that had inflated backtest returns by 30+ percentage points (survivorship bias, hindsight universe selection, stale pricing), then reported the corrected finding honestly: the signal set underperformed buying and holding the index.

GridPulse — AI Market Analyst for Australia's Electricity Grid github.com/milanshaji1/gridpulse 2026

- Built an end-to-end ML and GenAI system on live energy-market data: ingests 1M+ rows of 5-minute AEMO price and demand data into a DuckDB pipeline gated by 38 automated data-quality tests, refreshed daily.
- Trained a gradient-boosted price-spike early-warning model achieving 71% recall of \$300+/MWh spike days at a 20% alert budget in a five-month rolling-origin backtest, versus 58% for baseline methods.
- Engineered an LLM analyst agent whose daily market briefings cite 21–25 figures, each programmatically re-verified against source data before publication; scored 100% (30/30) on a golden-question evaluation set at \$0.06–\$0.12 per brief.
- Deployed as a fully automated daily pipeline (GitHub Actions) with a Streamlit dashboard; verified briefs publish unattended every morning.

github.com/milanshaji1/gesture-canvas

- Built a real-time computer-vision interaction system in TouchDesigner: MediaPipe webcam hand tracking drives generative visuals composited over the live camera feed — a shape tracks the thumb–index pinch point, scales with hand aperture, and hides when tracking drops — with the entire node network generated from reproducible Python rather than hand-built.
- Engineered a natural-language scene-direction layer (Claude API) behind a strict JSON parameter contract: every model response is schema-validated field-by-field and rejected before it can touch the live render — the same verification-gate discipline as GridPulse, generalised to a real-time system with no database to check against.
- Calibrated the pinch-gesture detector on 1,847 frames of recorded hand data: validated thresholds catch 531/531 true pinches with zero false positives across 5,400+ open-hand and no-hand frames; 31 automated tests (schema gate, mocked-API contract, verified session recaps) run in CI.

Handtracked VFX — Real-Time Hand-Tracked Filter Effects

github.com/milanshaji1/handtracked-vfx 2026

- Built a real-time computer-vision VFX effect in TouchDesigner: MediaPipe hand tracking drives three live-filtered video regions, each corner-pinned between a different pair of tracked fingertips across both hands.
- Diagnosed and fixed two engineering issues through targeted testing: a masking-order bug letting displacement filters leak colour outside their region (fixed by filtering before masking), and a tracking-dropout case corrupting a region's shape when a hand left frame (fixed with per-region validity gating, verified via a captured live frame).

IAB303 Business Intelligence Capstone, QUT — Distinction

2024

- Data lead on a four-person team delivering a business intelligence solution for a real industry client.
- Diagnosed critical flaws in the client's existing data pipeline and rebuilt it from scratch to process roughly 60,000 records reliably.
- Designed an executive dashboard that cut a full day of manual reporting down to a live view refreshed in minutes.
- Client rated the work among the most useful they had received from a student team, citing both analytical quality and clarity of outputs.

CAB420 Machine Learning, QUT

2024

- Built and evaluated image-classification models in PyTorch (data preprocessing, CNN design, transfer learning), taking an independently-scoped project from problem definition to a documented model at 94% test-set accuracy.

MXB262 Applied Statistical Methods, QUT

2023

- Applied regression, generalised linear models (GLMs), spatial modelling and time-series analysis in R to a real invasive-species dataset of over 10,000 observations.
- Identified a fundamental flaw in the modelling approach midway through, rebuilt the methodology, and still delivered strong results.

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- **Quantium Data Analytics Job Simulation, Forage (Mar 2026):** customer segmentation and uplift analysis in Python, delivered as business recommendations rather than technical output.
- **Commonwealth Bank Introduction to Data Science, Forage (Mar 2026):** data analysis and pattern recognition in an enterprise context, focused on communicating findings to non-technical decision-makers.
- **ANZ Data Analytics & Visualisation, Forage (Apr 2026):** transaction-data analysis and reporting in a regulated environment, with emphasis on accuracy and data integrity.
- **Kaggle Machine Learning Competitions (2024 – present):** ongoing classification, regression and NLP work on real-world datasets outside coursework; best finish top 7% of roughly 3,500 entrants.

LEADERSHIP & WORK EXPERIENCE

Universal Store, Sales Associate

Sep 2023 – Present

- Two and a half years on a high-volume retail floor, consistently exceeding individual sales targets by 15 to 20 percent.
- Trained and mentored six new team members and was trusted with keyholder and store-opening duties within the first year.
- Built rapport quickly across a diverse customer base, developing the clear, adaptable communication that technical study alone does not build.

Rivers, Sales Associate

Jun – Dec 2022

- Customer-facing sales role during the first semester of university, balancing work alongside a full study load.

LEADERSHIP & EXTRACURRICULAR

- **QUT Data Science Club, Committee Member (2024 – present):** help run technical workshops and events, including a student data hackathon for around 40 participants.
- **Volunteer tutor, quantitative units:** support first-year students with statistics and programming, translating difficult concepts into plain language.