

# Philipus Sanjaya

Melbourne, VIC · +61 405 389 142 · [sanjayaphilipus11@gmail.com](mailto:sanjayaphilipus11@gmail.com) · [github.com/Twinheaded](https://github.com/Twinheaded) · [linkedin.com/in/philipus-sanjaya](https://linkedin.com/in/philipus-sanjaya)

Final-semester Bachelor of Computer Science (Data Science & AI) student at Swinburne, completing July 2026. Built an AWS-based anomaly-detection architecture for industrial control systems and multi-agent AI simulations in Python, delivered with PRD-driven planning and milestone-based Git workflows. Two years of full-time e-commerce operations experience; seeking graduate software engineering or data/ML roles, available from July 2026.

## EDUCATION

### Bachelor of Computer Science — Data Science & AI major

2023 – Jul 2026 (expected)

Swinburne University of Technology, Melbourne

Key units: Machine Learning, Intelligent Systems, AI for Games, AI Engineering, Data Structures and Patterns

## TECHNICAL SKILLS

**Languages:** Python, SQL, R, C#, JavaScript

**ML & data:** scikit-learn, TensorFlow/Keras, PyTorch, pandas, NumPy, Matplotlib, Plotly

**Cloud & infrastructure:** AWS (Lambda, Kinesis, S3, SageMaker, Timestream), Docker, Linux

**Practices & tools:** Git/GitHub (Conventional Commits), pytest, Jupyter, REST APIs, Tableau

## TECHNICAL PROJECTS

### AEGISX — Industrial Control System Anomaly Detection

Python, AWS

- Designed a passive Modbus monitoring pipeline for smart-grid infrastructure, streaming sensor data via Kinesis and Lambda into Timestream, RDS and S3
- Built SageMaker anomaly detection with automated Step Functions/SNS alerting and a dashboard on App Runner/CloudFront
- Delivered a security gap assessment (six gaps identified) and an 11-week implementation roadmap presented to stakeholders

### Sentiment-Driven Stock Movement Prediction

Python, TensorFlow/Keras, scikit-learn

- Built a multi-source sentiment pipeline (Alpha Vantage, Finnhub, NewsAPI) scoring financial news with VADER, TextBlob and FinBERT
- Engineered 40+ features, including sentiment–volatility interaction terms, feeding LSTM/GRU models and a three-classifier ensemble for ASX equities
- Refactored the codebase to an sklearn-style interface, cutting external API calls by 67%

### Multi-Agent Game AI — Capture-the-Flag Arena

Python, pygame

- Built a real-time CTF simulation with two autonomous three-agent teams comparing centralised vs greedy coordination strategies
- Authored a PRD with 40+ functional requirements across nine subsystems; tracked delivery through 20+ issues and milestones in Linear

### Transport Data Analytics Dashboard (BITRE)

R (Shiny, ggplot2), Plotly, AWS S3

- Built an interactive dashboard over 50,000+ Australian transport records with time-series forecasting and geospatial mapping
- Deployed on AWS with an automated data pipeline; led the project team and defined the dashboard architecture

## WORK EXPERIENCE

### E-commerce Operations Manager — Aventru (startup), Indonesia

Jan 2021 – Jul 2023

- Managed end-to-end inventory and order operations for an import retail business (China to Indonesia), overseeing warehouse efficiency across 350+ SKUs
- Ran daily marketplace and logistics operations (Tokopedia, Gojek), coordinating directly with stakeholders to keep stock and systems running smoothly
- Identified and closed loopholes in the stock-inventory system; trained and supervised a team of 4 new hires

## LEADERSHIP & VOLUNTEERING

### Chief Lighting Technician — Rose of Sharon Church, Melbourne

May 2024 – Present

- Lead the volunteer stage-lighting team (Chamsys QuickQ 10 console); wrote the ministry's Standard Operating Procedures and manage the department's annual budget

### Sponsorship Manager — PPIA Swinburne

Dec 2024 – Dec 2025

- Secured and managed four external sponsorships; support the finance division and coordinate event volunteers