ANDREW TIMOTHY ANGGARA

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EDUCATION

University of Sydney Sydney
Bachelor of Science in Computer Science and Statistics | WAM: 80 | Dalyell Scholar (Academic Merit) July 2026

Relevant Coursework: Data Analytics: Learning from Data, Intro to AI, Statistical Inference
Professional Certification: AWS Cloud Practitioner

EXPERIENCE

University of Sydney University
Denison Scholar – Summer Research Intern January 2025 - March 2025

- **Automated** NDVI feature extraction by replacing manual **QGIS** workflows with a Python-based pipeline that ingests and preprocesses satellite imagery for scalable downstream analysis.
- **Optimized** satellite data collection using **multi-threading** with the **Sentinel-2 API** and **Google Earth Engine**, reducing data processing time by **50%**.
- **Analyzed** and **visualized** NDVI time-series across spatial regions to uncover trends in vegetation health, contributing to data-driven insights on land productivity.

Intersystems Database Management System Provider for Hospitals
Software Engineering Intern December 2023 - Feb 2024

- **Developed** a data pipeline to transform unstructured clinical inputs (doctor's notes, PDFs, voice memos) into structured **FHIR messages**, streamlining healthcare documentation workflows.
- **Managed** and queried **vector databases** to support **LLM-driven** semantic search, mapping medical terms to **SNOMED codes** for structured interoperability.
- **Engineered** a full-stack prototype using **Flask** and **React**, integrating a backend vector similarity engine to support clinical terminology retrieval.
- **Collaborated** with software engineers and clinical stakeholders to refine data mapping logic and validate use cases in a real-world healthcare environment.

PROJECTS

Australian Health Survey Data Analysis Data Science Personal Project

- Applied **PCA** on grouped dietary data to uncover key eating patterns across the Australian population.
- Used **multiple regression** to evaluate associations between dietary components and chronic disease risks (e.g. diabetes).
- Generated actionable insights supporting targeted public health interventions.

Adult Income Classifier Machine Learning Project

- Performed full pipeline in **R** including EDA, data cleaning, feature encoding, and imputation.
- Benchmarked **Logistic Regression**, **SVM**, and **Random Forest** using **10-fold cross-validation**.
- Achieved **85% accuracy** with Random Forest; interpreted feature importances to improve transparency.

SKILLS

Languages: Python, R, SQL, C++, C, Java

Libraries & Tools: Scikit-learn, Pandas, NumPy, Matplotlib, XGBoost, Flask, React, Google Earth Engine

Concepts: Regression, Classification, PCA, Time-Series Analysis, NLP, Vector Search

Cloud & Platforms: AWS (Lambda, DynamoDB), Azure, Git, GitHub