

Jenul Ferdinand

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Education

Bachelor of Computer Science | Monash University | Clayton Campus

Studying

Projects

Student Report Generation and Feedback Automation for an Education Provider

[Documentation](#)

- Developed an automated system within the Google Apps Script platform using HTML, CSS and JavaScript that allows teachers at Digimaker across 50+ schools to give weekly feedback for their students, generating PDF reports for all students enrolled in the program at the end of the term.
- Worked around the limitations of this technology to offer a zero-cost solution to student reporting.
- Optimised script execution times prioritising purely functional behaviour with minimal side effects.
- Hosted web application to provide a user interface for administrators supplied with management features.

MonSTAR: Monash University's Open-Source Course Review and Search Platform

[Website](#) [GitHub](#)

- A digital platform built for Monash University students to easily browse and review subjects and electives.
- Retaining an active user base, averaging 1000 visits per month, and received approval from the IT Faculty at Monash.
- Developed the backend using Node.js, Express, and MongoDB, implementing RESTful API endpoints.
- Developed the frontend using Angular component-based architecture with model view controller design patterns.
- Designed WebCoLa course progression maps for subjects using requisites data from backend APIs.
- Populated the MongoDB Atlas database using scraped course and unit data from the Monash Unit Handbook.
- A strong focus was put into Generative & Search Engine Optimisation, maximising search visibility for 10,000 pages.

Work History

Computer Science Intern

August 2025 – October 2025

Hawthorn Football Club

Mulgrave, VIC

- Mentored by the tech and data GM, tasked to build a workflow optimisation project to assist the coaching staff.
- Enterprise AI integration using Google Agentspace within GCP to facilitate data analysis for AFL coaching staff.
- Implemented tabular RAG for transactional AFL data offered by ChampionData hosted on Snowflake Cloud.
- Integrated tailored AI agents and ML models using the Google Agent Development Kit (ADK) and Vertex AI.
- Developed a one-shot prompt data analysis workflow built using Claude Code subagents.
- Delivered a presentation on prompt engineering for coaches outlining how to prompt LLMs effectively.

Software Engineer

July 2025 – Present

Plandid

Remote, VIC

- Developed the backend using Python, FastAPI, Pydantic, and SQLAlchemy for Plandid's customer mobile app and vendor dashboard. Built for couples seeking wedding photographers, videographers, and content creators.
- Designed an optimised PostgreSQL database schema with 36 relational tables, implementing proper indexing strategies and query optimisation techniques that reduced average query time by 40%.
- Prioritised clear separation of concerns, modularisation, and scalability with a well thought out architecture.
- Implemented seamless calendar sync using Google Calendar API, storing encrypted user calendar data securely in the database with CSRF protection using synchronised tokens.
- Fetching and storing Google reviews for vendors using the Google Places API and also allowing customers to write reviews within the application.

Programming Tutor & Automation Developer

October 2024 – Present

Digimaker

Eastern Suburbs, VIC

- Teaching weekly Python, Java, C & JavaScript classes to primary school students across 8 different schools, achieving an average 90% in-class completion rate for my students.
- Used supplied lesson sheets to break down core programming concepts, allowing students to independently complete each coding challenge.
- Schools: Leibler Yavneh College, McKinnon PS, Ruskin Park PS, Mulgrave PS, Burwood East PS, Greythorn PS ...
- Developed a student report generation automation using JavaScript on Google Apps Script.
- Utilised clasp and the glcloud CLI tool for local development with git for version control.
- Setup Github Actions for CI/CD, with automated testing using Jest for improved maintainance and less errors.

Volunteering

AI Engineer

August 2025 - Present

Monash Assistive Tech Team (student team)

Clayton, VIC

- Group work and PhD led research for responsible conversational AI to support individuals with disabilities, utilising voice-text input, and emojis for safe token output.
- Reviewing AI research papers on ML approaches for emotional intelligence and communication patterns.
- Translating theoretical concepts into practical implementation utilising AI as a judge patterns and evaluations.
- Building an AI application using Python and FastAPI with an agentic pipeline using LangChain and LangGraph.
- Experimented with emoji similarity search with embeddings using PyTorch and sentence transformers in Jupyter.

Autonomous Systems Engineer

August 2025 – Present

Monash Connected Autonomous Vehicle (student team)

Clayton, VIC

- MCAV is a premiere engineering student team developing autonomous vehicle and intelligent transport technologies, from Monash University.
- My role is within the Urban Autonomy team, working with software and hardware R&D to achieve SAE Level 4 autonomy with MCAV's StreetDrone Renault Twizy vehicle.
- Starting my final year project partnered with this student team, making use of ROS2 simulations to create an autonomous ride-sharing mobile application built using React Native and a Rust backend with a Kafka data collection pipeline to continuously improve autonomy.

Project Lead

May 2024 – June 2025

Faculty of Information Technology Society (student society)

Clayton, VIC

- Led a team of 8 students to build projects that benefit the student community at Monash University.
- Mentored colleagues in full-stack and project maintainance best practices for version control and pull requests.
- Facilitated a productive and inclusive team environment, prioritising time management to fit the busy uni schedule.
- Oversaw project timelines using Jira, defining & monitoring issues, epics, and sprint goals.

Monash Innovation Guarantee

January 2025

UNICEF/Hashcode

Docklands, VIC

- Took part in the 3-week innovation sprint offered by Monash University to conceptualise and pitch a secure SaaS architecture for UNICEF's uSupport platform. Awarded with a HD final grade.

Computer Science YouTube Channel

July 2023 – October 2024

@ferdinandcoding

Online

- Produced educational videos on algorithms, data structures, and theoretical computer science.
- Grew the channel to over 700 subscribers and accumulated a total of 500K+ views.
- Simplified computer science topics for a broad audience via short form and long form content.

Licenses & Certifications

Australian Computer Society

Associate Member

Victorian Government

Working with Children Check

NVIDIA

Developer Program Member

Google

Introduction to Agentspace

LangChain

Deep Agents with LangGraph

Accenture UK

Developer & Technology Job Simulation

Commonwealth Bank

Software Engineering Job Simulation

J.P. Morgan

Software Engineering Job Simulation

Technical Skills

Languages: C, C++, C#, Python, Go, Rust, Java, JavaScript, TypeScript, HTML/CSS/SCSS, SQL, JSX, Kotlin.

Technologies: React, React Native, Next.js, Angular, Node.js, Docker, MongoDB, PostgreSQL, Flask, FastAPI, Express.

Tools: Git, NPM, UV, Yarn, Powershell, Linux, VS Code, Firebase, GCP, AWS, Akamai, Snowflake, Oracle SQL Developer, Jira.

Libraries: pandas, numpy, matplotlib, sklearn, langchain, numpy, ngx-graph, RxJS, Socket.IO, JUnit, pytest, Jasmine.

UI Libraries: Bootstrap, Material-UI, PrimeNG, ChakraUI, NextUI, Ant Design, Tailwind CSS, Shadcn UI.

Concepts: Algorithms, Data Structures, Theoretical CS, Full-Stack Development, CI/CD, DevOps, Database Management.