

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

Mulgrave, VIC

Hawthorn Football Club

- 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

Remote, VIC

Plandid

- 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

Eastern Suburbs, VIC

Digimaker

- 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, Greyston PS ...
- Developed a student report generation automation using JavaScript on Google Apps Script.
- Utilised clasp and the gcloud CLI tool for local development with git for version control.
- Setup Github Actions for CI/CD, with automated testing using Jest for improved maintenance and less errors.

Volunteering

AI Engineer <i>Monash Assistive Tech Team (student team)</i>	August 2025 - Present Clayton, VIC
<ul style="list-style-type: none">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 <i>Monash Connected Autonomous Vehicle (student team)</i>	August 2025 – Present Clayton, VIC
<ul style="list-style-type: none">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 <i>Faculty of Information Technology Society (student society)</i>	May 2024 – June 2025 Clayton, VIC
<ul style="list-style-type: none">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 <i>UNICEF/Hashcode</i>	January 2025 Docklands, VIC
<ul style="list-style-type: none">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 <i>@ferdinandcoding</i>	July 2023 – October 2024 Online
<ul style="list-style-type: none">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.