Jenul Ferdinand

+61405546209 | jenul15ferdinand@gmail.com | LinkedIn | GitHub
Australian Citizen, Knoxfield, VIC

EDUCATION

Bachelor of Computer Science (Advanced) from Monash University in Clayton, Victoria   In Progress

PROJECTS

Student Report Generation Automation   *Link*
- Architected & implemented 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, and at the end of the term generating high quality reports for all students enrolled in the program.
- Worked around the limitations of the technology to offer a zero-cost solution to student reporting for the company.
- Optimised execution times and code quality by applying functional programming concepts learnt through my degree.
- Designed and hosted a web application using Google Apps Script to present a clear and accessible interface for adminstrators.

MonSTAR   *Link*
- An accessible web application built for Monash University students to browse and review classes to take. Currently sitting at over 200+ credible reviews for subjects given by students across numerous faculties.
- 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 utilising WebCoLa to present course progression in a directed graph format.
- Delegated tasks for team members during development, utilising Jira for project management, ensuring completion before semester one of 2025.
- Populated our MongoDB Atlas database using scraped course and unit data from the Monash Unit Handbook.
- A strong focus was put into Search Engine Optimisation, this directly improved the platform's visibility for 8000 pages.

WORK HISTORY

Computer Science Intern   August 2025 – October 2025
Hawthorn Football Club   *Mulgrave, VIC*
- Worked with the technology team to build workflow optimisation projects for the coaches and staff.
- Developed an AI application with an environment setup by Google on their novel platform, Google Agentspace.
- Developed AI agents with access to transactional AFL data given by ChampionData hosted on Snowflake Cloud.
- Integrated customised agents and machine learning models using the Google Agent Development Kit and Vertex AI.
- Developed a one-shot prompt data analysis workflow built using Claude Code subagents.
- Created a presentation on prompt training for the coaches outlining how to prompt LLMs effectively.

Software Engineer   July 2025 – Present
Plandid   *Remote, VIC*
- Developed the backend using FastAPI, Pydantic, and SQLAlchemy for Plandid's customer mobile app and vendor dashboard. Built for couples seeking wedding photographers, videographers, and content creators.
- Architected and optimised a complex 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 calendar syncing using the Google Calendar API, storing encrypted user credentials securely in our PostgreSQL database with CSRF protection.
- Fetching and storing Google reviews for vendors using the Google Places API and also allowing customers to write reviews within the application.

Programming Tutor & Business Automation Developer   October 2024 – Present
Digimaker - Programming for Young Makers   *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 and currently maintaining the student report generation automation. Setup Github Actions for CI/CD, with automated testing for improved maintainance and less errors.

VOLUNTEERING

AI Research & Development (PhD Supervised)
Monash Assistive Tech Team
August 2025 - Present
Clayton, VIC

- A student-led team designing open-source hardware and software that supports the daily lives of people with disabilities with community, care and creativity.
- Working with a team of students, being led by PhD candidate Benjamin Phua from the Monash Emodied Visualisation group. Reviewing AI research papers and academic literature on machine learning approaches for emotional intelligence and communication patterns, translating theoretical concepts into practical implementation.
- Experimenting responsible AI systems for vulnerable communities, implementing rigorous safety measures and ethical guardrails. Following new found evaluation methodologies to ensure we follow the best practices to build comprehensive evaluation pipelines, including automated testing, AI as a judge patterns, and human-in-the-loop validation.
- Building an AI application using Python and FastAPI for the backend with an agentic pipeline using LangChain+LangGraph, and LangSmith for observability.
- Created emoji similarity search with embeddings using PyTorch and Sentence Transfomers.

Student Software Engineer
Monash Connected Autonomous Vehicle
August 2025 – Present
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 computer science 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
Faculty of Information Technology Society (WIRED Monash)
May 2024 – June 2025
Clayton, VIC

- Led the development of MonSTAR which directly benefited the student community at my university.
- Mentored team members with full-stack development with a primary goal of creating a productive and inclusive team environment.
- Oversaw project timelines using Jira, defining & monitoring issues, epics, and sprint goals.

Monash Innovation Guarantee
UNICEF/Hashcode
January 2025
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
@ferdinandcoding
July 2023 – October 2024
Online

- Produced educational videos on algorithms, data structures, and theoretical CS.
- Grew 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.