MUHAMAD FIRDAUS BIN MOHD RAZALI

Bachelor of IT (Software Engineering) Student

Phone : +6011-64424762
Email : muhamadfirdaus.mohdrazali97@gmail.com
LinkedIn : https://www.linkedin.com/in/muhamadfirdausmohdrazali/
GitHub : https://github.com/matyod
Website : https://firdausrazali.me/

SUMMARY

Final year Software Engineering student with a background in electrical maintenance at Seagate. I spent five years fixing industrial equipment and am now applying that same problem-solving mindset to build and deploy software applications with a focus on backend architecture. I am self-taught in SQL, Python, HTML, and CSS before pursuing Bachelor of IT with a major in Software Engineering, and I have experience deploying systems using Node.js, Redis, and Docker to VPS recently.

EDUCATION

UNITAR International University **2023 – Present**
Bachelor of Information Technology (Software Engineering)

- **CGPA:** 3.73 (current)
- **Final Year Project (In-Progress):** CariArah Venue Wayfinder: Implementing Graph Algorithms on Digitized Spatial Data

SKILLS

Technical Skills

- Languages: JavaScript, HTML/CSS, SQL, Java, C++, PHP
- Backend & Tools: Node.js, Express.js, Redis, PostgreSQL, MySQL, MongoDB, Postman
- Deployment: Git, Docker, Docker Compose, Linux (VPS/WSL)
- Other: OOP, ERD Modelling, Root Cause Analysis, Responsive Design

Soft Skills & Leadership

- Leadership: Mentoring & Training, Task Delegation, Self-Initiative
- Collaboration: Teamwork, Cross-Functional Communication, Peer Code Reviews, Feedback Receptivity
- Analytical Problem-Solving, Time Management, Adaptability, Lifelong Learning (Growth Mindset)

EXPERIENCE

Equipment Engineering Specialist (Electrical & Manufacturing) **2018 – 2022**
Seagate Technology (Johor, Malaysia)

- Fixed and maintained high-speed automated machines and electrical systems to keep production running.
- Interpreted schematic diagrams and used diagnostic tools to find the root cause of electrical and mechanical failures.
- Used Excel to log maintenance data, daily shift report, and track equipment performance trends.
- Trained new operators on how to use equipment safely and perform basic machine troubleshooting.
- Monitored process variables and equipment performance, adjusting settings to maintain operational stability.
- Coordinated with warehouse and cross-functional teams for material delivery and scheduled repairs.

PROJECTS

CariArah Venue Wayfinder • Final Year Project • In-Progress

- Technologies: Node.js, Express.js, PostgreSQL, MongoDB, Redis
- Building a tool to help people find their way inside buildings by turning floor plans into digital data.
- Implementing graph algorithms to calculate the best paths between points.
- Managing the project development from initial system design to implementation as part of my Final Year Project.

University Grading & Information System • In-Progress • GitHub: Backend

- Technologies: Node.js, Express.js, PostgreSQL (Sequelize ORM), Redis, Docker
- Developing a RESTful API service to manage academic records including student enrolment, courses, and semester data.
- Implementing middleware chains for validation and sanitization; orchestrating multi-container environment using Docker Compose.

Weather Service with Redis Caching • Demo • GitHub: Backend / Frontend

- Technologies: HTML, CSS, JavaScript, Node.js, Express.js, Redis, Docker, Nginx, GitHub Actions
- Developed a full-stack weather application; reduced API latency by ~89% (530ms to 60ms) using Redis caching with TTL configuration.
- Deployed to DigitalOcean VPS with automated CI/CD pipeline; hardened infrastructure with Nginx reverse proxy, Fail2Ban, UFW firewall, and SSL certificates.
- Implemented rate limiting, XSS prevention, and httpOnly cookie sessions for security.

Legacy Coursework Assignment Projects

Migrated to GitHub to showcase learning progression and academic completion

Marine Plastic Recycling Awareness Website • Group Coursework • GitHub

- Technologies: HTML, CSS, JavaScript, PHP, MySQL, Chart.js, GSAP, Google Maps API
- Developed a full-stack website to educate users about marine pollution with interactive data visualizations and animated UI elements.
- Integrated Google Maps API for conservation organizations; configured PHPMailer with SMTP for automated email notifications.

Marine Debris Pollution Data Collection Web Form • Group Coursework • GitHub

- Technologies: HTML, CSS, JavaScript, Leaflet.js, Geolocation API
- Built a multi-step form application for reporting pollution incidents with automatic geolocation detection and interactive map marker adjustment.
- Implemented client-side sanitization using HTML entity encoding and keyword filtering to prevent XSS and HTML injection attacks.
- Validated multi-file image uploads with strict type checking; submitted data asynchronously using Fetch API.

Dungeon Adventure Game • Group Coursework • GitHub

- Technology: Java
- Developed a terminal-based RPG with graph-based room navigation, turn-based combat system, and inventory management.
- Applied OOP principles including encapsulation, inheritance, and abstraction to create modular game entities.
- Implemented state management for tracking visited rooms, health mechanics, and game completion conditions.

Library Management System • Individual Coursework • GitHub

- Technology: Java
- Built a terminal-based system to manage book inventory and patron transactions with auto-generated IDs and transaction history tracking.
- Implemented regex validation for names, emails, phone numbers, and ISBN codes; used inheritance to reduce code duplication.
- Managed data with ArrayLists and exception handling for user input processing.

Inventory Management System • Group Coursework • GitHub

- Technologies: HTML, CSS, Bootstrap, JavaScript, PHP, MySQL
- Designed and implemented a database-driven web application using ERD modelling with Chen notation and normalization principles.
- Built CRUD operations across multiple modules including item management, incoming/outgoing transactions, and report generation.
- Wrote complex SQL queries with joins and subqueries; implemented pagination and date-range filtering for large datasets.

Energy Consumption Calculator • Group Coursework • GitHub

- Technology: C++
- Developed a terminal-based billing application to automate energy cost calculations with tiered pricing for residential and commercial users.
- Implemented input validation with error recovery using *cin.fail()* and buffer clearing to handle incorrect data types.
- Applied procedural programming fundamentals including control structures, iteration, and array manipulation for data storage.