// CONTACT

+6018-7678169

attukoang5@gmail.com

linkedin.com/in/ang-imam-mahdi-ali-attuko-89701738a/

https://github.com/nestchao

NO. 2A JALAN DANAU SAUJANA KUALA LUMPUR, 53300

Available for internship:
13 Jan 2026 - 31 May 2026

// LANGUAGES

- Chinese
- English
- Malay

// SKILLS

- Java
- C++
- Kotlin
- Python
- MySql
- Github

IMAM MAHDI ALI ANG ATTUKO

DIPLOMA IN COMPUTER SCIENCE

// ABOUT ME

Driven Computer Science student with a proven record of academic excellence (3.9117 CGPA). Skilled in multiple programming languages including Java and Kotlin, with hands-on experience in database management with MySQL and version control with Git. I am a hardworking individual looking to secure an internship where I can rapidly expand my skills while contributing to a dynamic development team.

// WORK EXPERIENCE

Sunshine Hampers & Florist Pte. Ltd.

2024

Clerk

- Managed the end-to-end retail sales cycle, from providing expert customer consultation on custom goods to processing final payments.
- Handled daily financial operations, including invoicing, managing cash and credit transactions via the POS system, and performing accurate reconciliations.

// EDUCATION

Tunku Abdul Rahman University of Management and Technology

2024 - 2026

Diploma in Computer Science

- Current CGPA: 3.9117 / 4.00
- Relevant Coursework:
  - Object-Oriented Programming Techniques (OOP)
  - Data Structures & Algorithms
  - Database Development & Technology (MySQL)
  - Mobile Application Development (Kotlin)
  - Software Development Fundamentals
  - Computer Architecture

SMK Taman Pelangi Indah, Johor Bahru

2019-2024

SPM: 1A+, 1A, 2A-, 3B+, 1B, 1C+

// PROJECT

AI-Powered Study Assistant and Code Synchronization Platform

- **AI-Driven Note Generation:** Designed a complex, multi-step prompt system for the Gemini 2.5 Flash model to transform dense academic PDFs/images into simplified, structured Markdown/HTML notes (e.g., using specific rules for compression, emoji headers, and foreign language annotations).
- **Intelligent Chatbot Context:** Implemented a real-time, context-aware chatbot by dynamically fetching and combining simplified notes from all user-uploaded sources, ensuring the AI strictly answers *only* from the provided material.
- **Advanced Document Ingestion Pipeline:** Developed a maximum-completeness PDF extraction utility using PyMuPDF (fitz) and Tesseract OCR, intelligently merging native text with image-derived text (after OpenCV/Numpy preprocessing) to capture all content, including tables and figures.
- **Past Paper Solver:** Created a feature to upload and solve past exams (PDFs, images) using the Gemini API's multimodal capabilities, returning structured JSON question-answer pairs for easy review.
- **Real-Time File Synchronization Service:** Developed a robust background service (sync_service_routes.py) that performs bi-directional synchronization between local directories and Firestore, managing CRUD operations (Update/Create/Delete) for source code files based on SHA256 file hashing.
- **Code Structure Visualization:** Automatically generated a textual file tree (tree.txt) during synchronization, allowing users to view the project structure and enabling the AI to answer structure-specific questions.
- **Advanced Caching Strategy (L1/L2):** Implemented a layered caching system: an ephemeral L1 in-memory cache for rapid retrieval and a persistent L2 Redis cache for data like fetched media and generated study notes, significantly reducing Firestore reads and improving performance.
- **Custom Caching for Media:** Overcame cross-platform limitations for Flutter's Image.file by implementing a custom CacheManager and FirestoreFileService to correctly fetch raw media bytes from the chunked Firestore storage layer.

Travel Package Booking App

- **Modern Declarative UI (Jetpack Compose)**: Constructed a fully declarative UI with smooth navigation, utilizing features like LazyColumn, HorizontalPager, and custom styling to deliver a high-quality mobile experience adaptable to phone and tablet layouts.
- **AI Chat Integration (Gemini API):** Successfully integrated the Google Gemini API to create an in-app AI Assistant, allowing users to ask natural language questions about package details (price, itinerary) based on the package's real-time JSON data.
- **Real-time Data Flow:** Used Kotlin Flow and Firestore's Snapshot Listeners across all data sources (Users, Notifications, Packages) to stream live data updates directly to the Compose UI, ensuring all screens reflect the current state instantly.
- **Robust Notification Scheduling:** Implemented a reliable background service using Android WorkManager to schedule future notifications.

E-commerce and Inventory Management System

- **Full CRUD & Service Layer:** Designed a robust Service Layer for abstracting data access, implementing Full CRUD (Create, Read, Update, Delete) functionality for all major entities (Products, Orders, Deliveries, Users) via modular classes and streamlined JDialog entry forms.
- **Persistent Data Management:** Established durable data persistence by managing the serialization and deserialization of complex object graphs (e.g., nested Orders, OrderItems, Products) using the Gson library and JSON files.
- **Advanced Swing UI/UX:** Built a modern, high-fidelity graphical interface utilizing FlatLaf and FlatSVGIcon for styling, MigLayout for flexible, responsive component arrangement, and CardLayout for smooth page transitions.
- **Dynamic Asset Handling:** Implemented utilities for efficient image scaling and loading to prevent degradation of UI performance while displaying the product catalog.

Musical Awards Management System

- **Modular OOP Architecture:** Designed a comprehensive C++ application with distinct modules for Login, Event Registration, Booking, Payment, Attendance, and Voting, ensuring high modularity and maintainability.
- **Data Integrity & Persistence:** Utilized the nlohmann/json library for persistent data storage and implemented comprehensive Validation checks (regex, time logic) across all user inputs and database updates.
- **Complex Scheduling & Conflict Resolution:** Developed sophisticated validation logic to manage the event timeline, including strict pre-scheduling rules, automatic status updates (Scheduled, Ongoing, Completed), and time conflict resolution for performances.
- **Atomic Financial Transactions:** Engineered a robust Payment and Refund system featuring a 24-hour pending status, secure seat reservation, and an automated refund process for cancellations (including fee calculation and status updates).
- **Real-Time Data Monitoring & Visualization:** Implemented a system for Organizers/Admins to monitor live event metrics, including sales, attendance status, and venue seat availability, visualized via custom console graphics (extended ASCII seating charts).

Financial Management System

- **Financial Tracker:** Full-stack personal expense tracker (Python/Tkinter) enabling CRUD operations on income and expenses across multiple accounts. Features real-time Matplotlib visualisation of spending categories.
- **GUI & Assets:** Developed dynamic UI with custom Tkinter styling, smooth animations, and dedicated screens for tracking total net assets and individual account balances.

Airport Flight Network Routing System

- **Graph Implementation & Management:** Engineered a core graph structure using Java's Map<String, ArrayList<String>> to efficiently represent airports (vertices) and bidirectional flight paths (edges).
- **Shortest Path Algorithm (BFS):** Implemented the Breadth-First Search (BFS) algorithm to guarantee finding the optimal (shortest-hop) route between any two specified airports within the network.
- **Persistent Graph Storage (JSON):** Developed a robust DataManagement module using Gson for serializing and deserializing the entire complex graph structure to a JSON file, ensuring data durability across application sessions.
- **Full CRUD Operations:** Created comprehensive command-line interfaces for users to perform Create, Read, Update, and Delete (CRUD) operations on the network (add/remove vertices and edges) with rigorous input validation.

// INVOLVEMENT

National Secondary School Programming Contest(NSSPC) 2023

- As a competitor