Abdurrahman Bin Milhan

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Professional Summary

Driven Computer Science student at the University of Nottingham Malaysia with a strong foundation in web application development, AI pipeline engineering, and SDLC practices. Proven track record in Agile environments, including deploying AI-powered diagnostic web applications via Docker. Eager to leverage my proficiency in Python, JavaScript, and FastAPI to contribute to Project Cubit's mission of building innovative construction-tech solutions. Committed to collaborative development, rigorous QA testing, and applying modern software patterns to solve real-world engineering challenges.

Education

International AS Levels — Mathematics, Physics, Information Technology
Grade: A, B, B — (June 2021 - August 2023)

University of Nottingham Malaysia — Bachelor of Science in Computer Science
Grade: Upper Second Class — Expected Graduation: June 2027

Technical Skills:
Languages: HTML/CSS, Javascript, FastAPI, Python, Java, SQL, C
Tools: Docker, Git/Github, Maven, Gradle, SQLite

Projects

- ***Oral AI*** ***April 2026***
  - Collaborated in a 5-member Agile team to build an AI-powered medical diagnostic web application for oral cancer and dental disease detection, which was deployed on Hugging Face Spaces via Docker.
  - Engineered a Smart Triage deep learning pipeline chaining ResNet18 (image routing), DenseNet169 (histopathology analysis, 96% accuracy) and YOLOv8 + SAHI (high-resolution clinical image detection across 6 dental classes)
- ***Tetris (Software Maintenance & Extension)*** ***August 2025***
  - Extended and refactored an existing Java/JavaFX Tetris codebase, implementing new gameplay features, resolving pre-existing bugs, and improving overall code quality and maintainability.
  - Refactored architecture by applying Factory, Observer, and Singleton design patterns and restructuring the codebase into MVC-aligned packages.
  - Implemented 2 major gameplay features: a Laser Drill power-up (column-clearing algorithm with procedural animation) and a Time Rewind system (stack-based state snapshots with resource balancing)
  - Achieved full test coverage across core systems (input routing, brick rotation, board logic, scoring) using a JUnit test suite; resolved 2 critical bugs.
- ***M4TCH*** ***April 2025***
  - Led a 7-member team in the full software development lifecycle (SDLC) of a Java based tile-matching puzzle game, from requirements gathering through testing and delivery.
  - Designed game features including real-time power-up systems (Freeze Time, Combo Multiplier, Instant Tiles), a dynamic scoring engine, and a persistent leaderboard.
  - Coordinated structured user acceptance testing (UAT) with an external team, resulting in identification of 3 software defects via formal bug reports.

Work Experience

- **Management Trainee** | Gentelle Hotel Supplies | Jeddah ***April 2023 - May 2023***
  - Streamlined daily inventory tracking by implementing an automated Excel-based process, reducing manual data entry errors by 15% and significantly increasing operational efficiency.
  - Collaborated with a cross-functional team of 4 to optimize supply chain workflows, ensuring timely fulfillment of B2B client orders during peak demand periods.

Languages

- **English** (fluent) **Tamil, Arabic, Malay** (limited)