AIDA SOPHEA BINTI MOHD ZAKI

Aida Sophea
aiidasophea@gmail.com
+601129039100

Final year Computer Science undergraduate majoring in Software Engineering, currently undergoing an internship at Perodua in the Plant IT department until August 2026. Experienced in full-stack development, machine learning, and software testing, with hands-on exposure to system validation and maintenance. Seeking a **full-time role starting October 2026**, where I can contribute to building reliable and scalable systems.

EXPERIENCE

Internship | Perodua **March 2026 – August 2026**

EDUCATION

University of Malaya | Kuala Lumpur **October 2022 – February 2026**
Bachelor of Computer Science (Software Engineering)
CGPA: 3.52

Bildungskolleg Schumann | Munich, Germany **April 2022 – October 2022**
B2

German-Malaysian Institute | Selangor **July 2020 – January 2021**
Education Advanced Subsidiary Level and Advanced Level (Engineering) (A-Level)
1A 1B 1C (Muet: Band 4)

Maktab Rendah Sains Mara, Kuala Kubu Bahru | Selangor **January 2015 – December 2019**
SPM: 1A+, 5A, 2B+ 1B

LANGUAGES AND SKILLS

Languages: Malay (Native Proficiency), English (Professional Proficiency), Deutsch (Upper-Intermediate)

Programming Languages: Java, HTML/CSS/JS, Python, PHP, SQL

Testing & QA: Manual Testing, Test Case Design, Equivalence Partitioning, GUI Testing, Unit Testing, Integration Testing, System Testing, Software Maintenance (Corrective, Adaptive, Perfective), Software Requirements Analysis (SRS), Black Box Testing. Test Plan, Test Design Specification, Test Case Specification, and Test Procedure Specification.

Frameworks & Tools: Node.js, React.js, Android Studio, Firebase, Docker, GitHub, Visual Studio Code, Oracle SQL, MongoDB, Packet Trace, Streamlit, Spring Boot

Methodologies: Agile (Scrum), Sprint-based Development, Component-Based Software Engineering (CBSE), CI/CD Pipeline Setup, Version Control (Git)

PROJECTS

Drone4Dengue Admin Web and DengueEye Mobile App (Final Year Project) **March 2025 – February 2026**

- Designed and implemented an AI-powered system that integrates drone imagery, machine learning, and meteorological data to detect mosquito breeding sites and forecast dengue outbreak risks with over 85% prediction accuracy.
- Built a cross-platform solution using NextJs, NodeJs, Python, Firebase, TensorFlow, and React Native, featuring automated image analysis and real-time risk mapping for public health monitoring.
- Integrated tools such as Flask, YOLOv8, Firebase Storage, and GeoCode API, enabling seamless data visualization and cloud-based drone image management.
- Developed 168 test cases for 25 application features using Equivalence Partitioning and GUI Testing, and implemented unit, integration, and system testing to ensure functional accuracy and cross-platform accuracy.

SpeakMath (University Project) **November 2025 – February 2026**

- Built a natural language math interpreter converting conversational commands into verified computations using Python, implementing a layered lexer/parser/interpreter architecture with LLM fallback resolution (Google Gemini 2.0 Flash API)
- Developed interactive Streamlit web interface featuring real-time compilation pipeline visualization, variable state tracking, and educational chatbot that demonstrates functional programming concepts (map/reduce/filter operations)
- Designed and executed 82+ comprehensive test cases with formal semantic proofs using denotational semantics, validating 6 fundamental axioms, 14 ambiguity resolution strategies, and edge case handling with structured error reporting.

TikTok Trend Prediction & Analytics Dashboard (University Project) **March 2025 – July 2025**

- Developed an AI-powered TikTok analytics platform using Python, processing 600+ scraped video features to build machine learning models (Random Forest, Neural Network, Decision Tree) achieving 91% accuracy in predicting viral content trends.
- Engineered comprehensive NLP pipeline leveraging VADER sentiment analysis, NRCLex emotion detection, LDA topic modeling, and spaCy NER to extract actionable insights from engagement patterns, hashtag effectiveness, and optimal posting times.
- Built interactive Streamlit dashboard featuring real-time trend visualization, sentiment analysis, topic evolution tracking, and viral prediction engine with feature importance analysis to guide content strategy for creator ecosystem.

Testing Report for Vozyk Application (University Project) **November 2024 – January 2025**

- Developed and conducted comprehensive black box testing for the Vozyk App. The project involved generating full documentation, including a Test Plan, Test Design Specification, Test Case Specification, and Test Procedure Specification.
- The app offers key self-management tools for mental well-being, such as a Mood Calendar, guided Breathing Exercises, Meditation routines, and trackers for Medicine, Appointments, and Lab Tests, alongside a Self-Assessment Quiz.
- Executed black box testing on core functional requirements. Specifically led the complete testing and documentation for the Register Module, Self-Assessment Quiz Module, and Meditate Module. Deliverables included generating and recording results in the Test Log, Test Incident Report, and Test Summary Report.
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EXTRACURRICULARS

Sustainable Energy and Green Technology Applications (SEGTA) to Universitas Airlangga 2025 **August 2025**
Participant, Short-Term Outbound Mobility Program

- Selected as one of 50+ participants from Malaysia to participate in this prestigious international program. Collaborated with students from 5 different countries on sustainable technology projects, contributing to research on renewable energy solutions that could reduce carbon emissions by 30% in urban environments.

Global Learning @ Overseas Bound Experience (GLOBE@UM) 2025 **June 2025**
Facilitator, Inbound Mobility Program

- Served as a facilitator for 20+ Indonesian students, organizing cultural exchange activities and technical workshops. Successfully coordinated 5 days events and achieved 95% participant satisfaction while promoting cross-cultural understanding and global collaboration.

UM Game Jam 2025 **January 2025**
Vice Secretary, competition

- Acted as Vice Secretary for UM Game Jam, a national-level game development competition by PEKOM, assisting in event planning, official documentation, and coordination with diverse student participants nationwide

UM to UI (Universitas Indonesia) Short Course on Sustainable IT 2024 **May 2024**
Participant, Short-Term Outbound Mobility Program

- Represented Universiti Malaya as one of 20 selected students in this international exchange program. Collaborated with Indonesian counterparts on sustainable IT solutions, learning about smart campus management that could reduce energy consumption by 25% and was presented to university leadership.

FCSIT Dean's Cup 2024 **January 2024**
Student Department Representative, competition

- Representing Software Engineering Department that consists of 300+ students and several staff members on a inter department sport competition for Computer Science Faculty by allocating suitable and competitive participants on each sport event.

FCSIT Dean's Cup 2023 **December 2023**
Contest Protocol Committee, competition

- Managed contest protocols for 400+ participants across 10 different competitions. Ensured fair play and smooth competition flow, contributing to the event's success with zero major incidents and maintaining high standards of academic integrity and sportsmanship.

ACHIEVEMENT

- **Preliminary Round for Programming League National 2024**
- **Dean's List award in Semester 3 and 5**