ZAKI SABAWI

Education

Monash Malaysia University

Expected Graduation: November 2025

Bachelor of Computer Science

Malaysia, Kuala Lumpur

• Courses: Algorithm and Data Structures, Theory of Computation, Programing Paradigms, Mobile Application Development, Software quality and testing, Object oriented design and implementation, Data Bases, Computer Architecture, Introduction to Data Science, Introduction to Cyber Security

Projects

Guitar Hero | Source Code

TypeScript | NodeJS

- Developed The full back end of a guitar hero inspired game using **Node.Js** and **TypeScript**, serving as a hands on project to gain proficiency in **TypeScript** and **Functional Programing** Concepts.
- Applied Functional Reactive Programming (FRP) principles, utilizing states and observables to manage game logic and dynamic user interactions
- Strengthened understanding of functional programming paradigms such as immutability, pure functions, and reactive data streams.

Text to HTML Converter | Source Code

Haskell

- Developed a Text-to-HTML converter entirely in Haskell, demonstrating strong problem-solving skills and functional
 programming expertise.
- Utilized Abstract Data Types (ADTs) to design and manage structured representations of HTML elements, ensuring
 flexibility and clean code architecture.
- Strengthened understanding of abstraction, functional paradigms, and type-driven development through hands-on implementation.

Spell Checker | Source Code

Python

- Developed a Python-based spell checker that analyzes user input, builds a suffix-trie, and efficiently stores words for validation and correction.
- Implemented features to detect incorrect words and suggest the three closest matches, using trie depth and frequency analysis for accurate recommendations.
- Optimized performance using a **suffix-trie**, gaining practical experience with algorithm design, data structures, and text processing techniques.

Veterinary Database | Source Code

Oracle | SQL

- Developed a comprehensive veterinary appointment database using **Oracle SQL**, managing detailed records including appointment times, prescribed medications, pet and owner information, and pet types.
- Designed and optimized relational database schemas with rigorous constraints to maintain data integrity and prevent errors in scheduling, prescriptions, and record-keeping.
- Gained practical experience in database design, SQL programming, and data management for real-world applications.

Leadership

Monash Board Gaming Club | Instagram

Jun 2024 - Present

- Vice President of the Monash Board Game club, Oraganized and hosted events feature multiple board game creators, provided club members with access to industry professionals and explore innovative game designs on campus while allowing the creators to test out their new creation.
- Led and Hosted multiple highly attended events for a club of 150+ members fostering a lively, social atmosphere where participants where engaged and had fun

Technical Skills

Languages: Python, Java, SQL, JavaScript, Haskell, HTML

Developer Tools: Oracle, Git Libraries/Frameworks: NodeJS