

Lee Kai Yi Zachary

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Portfolio: <https://zachyboiii.github.io/zac-portfolio/> | LinkedIn: <http://www.linkedin.com/in/zachary-lee-kl>

*I am an independent and passionate learner interested in software engineering and artificial intelligence.
(Available from Jan 2026 to Aug 2026)*

WORK EXPERIENCES

Singapore University of Technology and Design (SUTD)

May 25 – Aug 25

Teaching Assistant 10.020 Data Driven World

- Assisted with two classes supporting learning in Python programming, data manipulation using Pandas/NumPy, and foundational algorithms through consultations and debugging help.
- Graded assignments and project components, providing technical feedback to improve code quality and logical problem-solving.
- Collaborated with faculty to refine course materials and enhance student learning outcomes.

New Creation Church

Mar 23 – Jul 23

Program Assistant

- Online program and webinar director
- Event planning using Microsoft PowerPoint & Excel
- Logistics management

EDUCATION

Singapore University of Technology and Design (SUTD)

Sep 23 – Present

- Bachelor of Engineering (Computer Science and Design)
- GPA 4.8/5.0, SUTD Global Distinguished Scholarship Holder
- Expected date of graduation: August 2027

Yonsei University

June 24 – Aug 24

- Yonsei International Summer School
- Achieved letter grade 'A' in Introduction to Psychology and Basic Korean Language I

PROJECTS

TruthieGO | DSTA BrainHack 2025 – Champion, CODE_EXP Competitive Category

May 25 – Jun 25

- Designed and implemented the core game logic of TruthieGO, a 2D educational board game using the Godot engine and GDScript, with modular, maintainable architecture to support multiple game modes and interactive mini-games.
- Developed secure and scalable backend services by integrating Firebase (NoSQL) for user authentication and session management, enabling real-time progress tracking across devices.

Singapore University of Technology and Design | 50.001 Information Systems & Programming

Jan 25 – Apr 25

- Engineered *Vroom*, an Android app connecting learner drivers with instructors, featuring booking, scheduling, chat, and quizzes
- Implemented Dijkstra's algorithm to match learners with nearby instructors and optimized app logic using Java and OOP principles

Singapore University of Technology and Design | 50.002 Computation Structures

Jan 25 – Apr 25

- Designed and implemented a real-time arcade game inspired by Squid Game's Glass Bridge on FPGA using Lucid HDL and finite state machines
- Built a custom datapath with register file and ALU, applying Beta CPU architecture principles
- Integrated random path logic, timer display, and bicolored LEDs for interactive gameplay feedback

KebunFresh | SUTD x PCU Hackathon

Nov 24 – Dec 24

- Developed a web platform to connect Surabaya locals with nearby farms for fresh crop purchases, addressing accessibility and trust in local food supply chains.
- Implemented a recommendation system using K-Nearest Neighbors model to analyze user behavior and generate farm suggestions.
- Deployed using Streamlit and collaborated with local students for user-centered design and cultural relevance.
- Collaborated with local Surabaya students to better understand and cater to local needs

Portfolio Website | Personal Project

Jan 25 – Jan 25

- Designed and developed a personal portfolio site to showcase projects, code samples, and design aesthetics for potential employers.
- Built using React.js and styled with modular CSS, emphasizing responsive design and component reusability.

LEADERSHIP AND VOLUNTEERING

New Creation Church

Aug 22 – Present

Lead IC, Games – Kids Camp Volunteer

- Consistently led the planning and execution of engaging, age-appropriate game activities for large-scale kids camps with attendance exceeding 600 children per event.
- Managed and motivated volunteer teams across multiple camps, ensuring seamless coordination of game logistics, setup, and safety protocols.
- Acted as primary liaison with external vendors for equipment and operational support, guaranteeing timely and efficient resource delivery.

SUTD Freshman Orientation

May 24 – Sep 24

Orientation Group Leader Head

- Responsibilities included event planning and people management
- Leadership, teamwork and public speaking
- Mentored and integrated incoming SUTD Freshmen students

Volleyball Club

Sep 23 – Jan 25

Secretary

- Represented Singapore University of Technology and Design in the Singapore University Games both in 2023 and 2024
- Collaborated with other clubs such as SUTD Tchoukball Club to organize inter-club camps to expose members from both clubs to new experiences
- Responsibilities included managing club attendance, logistics and administrative matters
- Organized and managed club booth at school events such as Open House, Night Fiesta and Fifth row showcase

SKILLS

- **Languages:** Python, Java, JavaScript, SQL, HTML/CSS
- **Frameworks & Libraries:** React.js, Streamlit, Pandas, NumPy, Matplotlib
- **Tools & Platforms:** Git, VS Code, Android Studio, Godot Engine, Lucid HDL, Rhino, Figma
- **Methodologies:** Agile