



# LOW ZI XIAN

42KL Cadet | Mechanical Engineer

- 018-2807122
- zixianlow97@gmail.com
- github.com/Zixianlow
- zixianlow.github.io
- inkedin.com/in/low-zi-xian-618779212

## EDUCATION

**Core Programme**  
42 Malaysia – Sunway  
Education Group  
2022 – 2023

**Mechanical Engineering**  
Universiti Sains Malaysia  
2016 – 2020

## SKILL & EXPERTISE

C | C++ | HTML | CSS |  
Javascript | Git | Linux |  
Python | React | Arduino |  
MATLAB | VS Code | Flutter  
| MySQL | HTTP Methods

## LANGUAGE

Chinese  
English  
Malay

## Experience

- Aug 2022 – Present  
42 Malaysia – Sunway Education Group  
**Core Programme**  
Competency in Computer Science  
Level 5 out of 9 (Core Programme)
- Feb 2022 – Jul 2022  
Solmax Bioenergy Solution Sdn. Bhd  
**Asistant Engineer**
  1. Manage and supervise on-site job schedules to ensure timely completion of tasks.
  2. Prepare and report accurate and comprehensive daily and monthly reports.
  3. Assist with store management, including inventory control, ordering supplies, and organising materials.
  4. Provide on-site supervision assistance, collaborating with the site manager on different states, Johor, Perak, Selangor, Sabah, Sarawak HDPE/LLDPE water tank installation.
- Jul 2019 – Sep 2019  
Forest City – Country Garden Pacificview  
**Engineering Internship**
  - 1. Building checking and quality assurance
  - 2. Assist in monitoring on-site rectification quality and construction progress
  - 3. Assist in site safety, civilization, and implementation of construction
  - 4. Collating inspection data and data management within the group

## Projects

- Personal Website**  
Link : zixianlow.github.io
- Calculator App**
  - Simple calculator app using React
  - Link : zixianlow.github.io/CalculatorApp
- Grocery list App**
  - Grocery shopping list, allow user to add, check and delete to item from list
  - Link : zixianlow.github.io/Grocery-List
- so\_long**
  - A 2D game featuring keys collection while avoiding getting caught by the enemies.
- cub3D**
  - 3D game inspired by "Wolfenstein 3D." Single player first person shooting game recreation.
- Skyscraper solver**
  - A solver to the puzzle game Skyscraper to meet the visibility and uniqueness rule. Give an effective solution (under a minute) up to 7x7 puzzle and could technically can solve any NxN Skyscraper puzzle if there is no time constraint.

## ○ Philosophers

- A classic concurrency problem known as the Dining Philosophers problem.
- Mutex and semaphores, Multi-threaded program and concurrency management

## ○ Minishell

- A minimalistic command-line interface, similar to a Unix shell for command execution.
- Supporting input and output redirection, as well as implementing the ability to pipe the output of one command into the input of another.
- Implementing signal handling for interrupt signals (e.g., Ctrl+C) and termination signals.

## ○ Webserv

- A functional web server from scratch which handle different HTTP requests and responses.
- Supports HTTP requests such as GET, POST, PUT, DELETE, HEAD

## ○ Push swap

- A challenges create an efficient algorithm for sorting stack of numbers using a limited operations.
- Understanding on different sorting algorithm such as Quick, Insertion, Bubble, Radix
- Advantages and disadvantages of different sorting algorithm

## ○ NetPractice

- A 10 level challenge to understand about networking including IP/TCP, subnet masking.
- Understanding on IP for host and network, subnet mask, switch and router, network availability for client and host

## Event Participation

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### ○ ImpactHack 2023 (June 2023)

- Prediction model based on sales records, Data visualisation on storage, sales, and profits, Restocking plan suggestion

### ○ Peer-Defense Hackathon (Oct 2023)

- A tool to view detailed information of cadets based on their blackhole days using data extracted from 42 API

### ○ Wildcard Hackathon (Oct 2023)

- A webpage design with a theme of human life to annoy user with the worst UI/UX