

# Sim Sze Yu

AI-native builder across data engineering, finance systems, and agentic workflows

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[instagram.com/szeyusim](https://instagram.com/szeyusim) | Medium | Kaggle

## Summary

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Computer Science student at **Universiti Malaya** building practical systems at the intersection of **AI, finance, and data engineering**. I work on agentic AI workflows, financial data systems, cloud data pipelines, and fast product prototypes that turn messy ideas into usable products.

## Experience

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**Data Engineer Intern**, Ryt Bank / YTL Digital Bank Jul 2025 - Jan 2026

- Built ETL pipelines to ingest data for downstream usage.
- Worked across data pipelines, orchestration, and cloud data infrastructure.

**Data Intern (Part Time)**, YTL AI Labs Apr 2025 - Jun 2025

- Crawled online data and used LLMs to generate synthetic data for ILMU, a Malaysia-based LLM.
- Supported data and AI systems work for model data preparation.

**AI Fullstack Developer Intern**, EmbeddedLLM Jul 2024 - Sep 2024

- Gained practical experience in GenAI infrastructure and LLM application development.
- Worked on LLM application development across product and engineering workflows.

**Technical Advisor**, GDGoC Universiti Malaya Oct 2024 - Jul 2025

- Looked after technical departments including GenAI, ML, CyberSec, and Developer core teams.
- Advised technical direction for student developer communities and project teams.

**Software Engineer Intern**, Techtics Solutions Sdn Bhd Apr 2024 - Jun 2024

- Gained practical exposure to blockchain and decentralised finance systems.
- Supported software engineering work in a professional development environment.

**Director**, Programming League National 2024 Jan 2024 - May 2024

- Directed a national programming league and built long-term leadership skills.

## Education

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**Universiti Malaya**, Bachelor's Degree in Computer Science (Artificial Intelligence) 2023 - Feb 2027 (expected)

- Overall CGPA: 3.98

**Kolej Matrikulasi Kejuruteraan Kedah**, Electrical and Electronics Engineering 2022 - 2023

- CGPA: 4.00; Co-curricular Mark: 10/10

**Chung Ling High School**, Computer Science Stream 2017 - 2021

- SPM: 8A+, 1A, 1B+; PT3: 9A+

## Selected Projects

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### Vibe Quant

- Autonomous alpha discovery framework using LLM agents, vector memory, and backtesting workflows.
- Combines agentic research orchestration with quant validation and market reasoning.

## UM Datathon Bitcoin Strategy

2024

- Bitcoin algorithmic trading strategy research and backtesting.
- Repository: [github.com/szeyu/UMDatathon-24](https://github.com/szeyu/UMDatathon-24)

## Hackathon Highlights

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### KitaHack 2026

Top 10 Finalist

- Open Ssyok Finance: personalised financial planner that visualises wealth growth.
- Repository: [github.com/szeyu/open-ssyok-finance](https://github.com/szeyu/open-ssyok-finance)

### UKM Data Challenge 2025

Consolation Prize

- Data insight on population and water stress across Malaysian states.
- Repository: [github.com/szeyu/UKMDataChallenge25](https://github.com/szeyu/UKMDataChallenge25)

### Alibaba Cloud Malaysia AI Hackathon 2025

2nd Runner Up

- FundSight AI: grant recommendation system for Malaysian SMEs.
- Repository: [github.com/szeyu/FundSight-Ai](https://github.com/szeyu/FundSight-Ai)

### KitaHack 2025

1st Runner Up

- Medimate: healthcare management assistant.
- Repository: [github.com/szeyu/Medimate-v3](https://github.com/szeyu/Medimate-v3)

### UMHackathon 2025

1st Runner Up

- AmanahBlock: Shariah-compliant AI and blockchain donation platform.
- Repository: [github.com/szeyu/AmanahBlock](https://github.com/szeyu/AmanahBlock)

### UM Datathon 2024

Champion

- Bitcoin quant algorithmic trading strategy.
- Repository: [github.com/szeyu/UMDatathon-24](https://github.com/szeyu/UMDatathon-24)

### Deriv Hack 2024

Top 10 Finalist

- AI eKYC project.
- Repository: [github.com/szeyu/Deriv-Hack](https://github.com/szeyu/Deriv-Hack)

## Writing

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### A Comprehensive Guide on Agent Development with Pydantic AI

2025

- Beginner-to-advanced guide for building reliable AI agents with Pydantic AI.
- Link: [Medium](#)

### How to Get the Most Out from AI

2026

- Notes on visual prompts, context folders, tables, diagrams, and better human-AI interaction.
- Link: [Medium](#)

### How I Win Most Hackathons

2025

- Stories and practical lessons from repeated hackathon participation and shipping under pressure.
- Link: [Medium](#)

## Skills

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**Agentic AI:** LLM Agents, MCP, Pydantic AI, RAG, Qdrant, memory, guardrails, evaluation

**Data Engineering:** ETL pipelines, orchestration, data quality, cloud workflows, Airflow, CI/CD

**Quant / Finance:** Backtesting, market data, stock metrics, signals, investment decision support

**Product / Web:** Next.js, React, TypeScript, Tailwind, FastAPI, rapid MVP development