Ihsan Lim Jia Ming

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About me

I'm a generalist. I adapt fast and have intentionally built my life as a personal eval of frontier OpenAI models, taking on my PhD with the expectation that LLM capabilities will continue its path. Understanding the trajectory of AI is probably the most important thing to anticipate and steer global change.

I connect ideas across disciplines: from deep sea mining & Islamic finance to education & refugee rights. And I'm particular about correctness: being careful with assumptions & thinking at the right layer of abstraction.

Education

Monash University Malaysia

(Feb 2021 – Jun 2025) ***Electrical and Computer Systems Engineering (Honours)*** *- WAM: 70%. CPGA 3.2.*

(Jan 2026 – Present) **Master of Engineering Science (Research)** - Full scholarship for combined PhD track.

- Where and how to project? Investigating Mobile Projective Augmented Reality: training a surface selection RL agent for context-aware Human-Robot Interaction with microLED-based projectors.

University of Warwick (Sep 2023 – Jun 2024)
Study abroad: One-year student exchange in the UK. Learned lots about semiconductor fabrication.

Kolej Yayasan UEM (Jul 2017 – Jun 2019)
STEP University of Cambridge Mathematics admissions test: *S, 1, S, for STEP I, II, III, respectively.*
CIE A-Levels: *Mathematics A* (97), Further Mathematics A* (98), Physics A* (93), Literature in English b (72)*

Work Experience

Mathematics Teacher – Think Academy US (Jun 2025 – Aug 2025)

- Online math "lesson delivery" to Pre-Algebra classes in the US and China. Strict quality control.

Test Engineering Intern – Lumileds Penang (Nov 2024 – Feb 2025)

- Tested LEDs in semiconductor production cleanrooms.
- Fixed statistical methodology in their 'Design of Experiments' while tasked with grunt Excel work.
- Reported severe security issues like privilege escalation in their internal production systems.

Publications

J. M. Lim, P. W. C. Ho, and C. P. Tan. *"**Rod-of-Scoops Control System to Reduce Sediment Disturbance in Deep Sea Mining**."* Proceedings of the IEEE SCOReD (2025), Kuala Lumpur, Malaysia.

- Proposed new collector vehicle concept that bridges the mining environmental & economic gaps.
- Awarded "Best Paper" and "Best Presentation" at the student conference.

Projects

Clash RL engine: Towards superhuman Clash Royale gameplay (2026)
- Building a faithful simulator & RL training pipeline for a popular mobile RTS game using Codex (GPT-5.5)

Automating food product categorization (2026)
- Saved ~100 work hours by using GPT-5.4 nano to label research data according to WHO food specifications.

Scientific data cleaning & processing (2025)
Developed a Python OCR + data cleaning pipeline converting 18hrs (5.5GB) of mp4 screen recordings into 28 time-series CSV datasets with custom configs, unit normalisation & error filtering.

Barbie-bot: Autonomous Pick-and-Place competition (2nd place) (2024)
- Led a team with no prior robotics experience to build a multi-sensor control system winner.

Undergrad Research: Centred VPP Modulation Scheme for LED-based digital communications (2023)
- Used C, Verilog and OptiSystem to explore custom modulation schemes for visible light communications.

Code golf
Top 200 code golfer worldwide for Python. Top 300 overall (top 3%) in code.golf.

Project Euler
Solved 70+ math-heavy problems with efficient number theory algorithms. Among top 3% of solvers globally.

Open-source contributions (2020 – 2022)
- Found a one-liner fix in CPython's parser to allow unicode keywords (harder than it sounds!)
- Reverse-engineered a Zelda Game Boy ROM binary. Managed huge Arabic Malay translation workflows.
- Fixed bugs for a 16-bit CPU simulator MARIE.js. Wrote a quine in assembly.

- Simplified math proofs in Lean 3's mathlib and formally verified computability and analysis theorems.
- Metamath world record speedrunner completing 100 symbolic proofs in first-order logic under 40 minutes.

Currently Reading

The Optimum Quantity of Money – Milton Friedman
I'm obsessed with the Friedman Rule and how nominal interest rates being 0% is optimal in ideal models.

Algorithms for Reinforcement Learning – Csaba Szepesvari
I prefer a rigorous handling of RL theory with proper math treatments. Intuition is gained by doing.

Volunteering Work

Malaysian Red Crescent volunteer (May 2023 – present)
Volunteered at mobile clinics for refugees and helped plan 4-day youth camps for a hundred migrant students.

Student Action for Refugees: Conversation Club volunteer (Oct 2023 – May 2024)
Conducted 1-to-1 English lessons for refugees in the UK.

Project Anak Malaysia: Education volunteer (July 2023)
Facilitated 2 weeks of educational activities at a rural primary school in Malaysia.

Achievements and Leadership

Bugcrowd Bug Bounty: High Severity IDOR and API exposures (2024) *USD $1800 P1–P3 vulnerabilities.*

Imperial College London: President's Undergraduate Scholarship (2020)
Awarded a scholarship (155 out of 25780 applicants). MEng Mathematics and Computer Science.

Kolej Yayasan UEM: Maths Competition Organiser (2018) *Question design and event management.*

Student Councillor, Tenby International School (2016, 2017) *Elected twice to represent the student body.*

Languages:

Fluent: English (IELTS: 8.0)
Working proficiency: Mandarin, Malay, Indonesian.
Basic: Standard Arabic.