Ryan Joo Rui An

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April 2025

EDUCATION

Dunman High School — Singapore, SG
Singapore–Cambridge GCE A-Level, RP: 90/90, Distinction in H3 Mathematics — 2024

- Ranked 6 / 456 in 2023, 12 / 446 in 2024.
- Academic Award (TBC).

Chung Cheng High School (Main) — Singapore, SG
Singapore–Cambridge GCE O-Level, L1R5 raw 6 nett 4 — 2022

- Best in Additional Mathematics, Mathematics in 2021.
- Chuang Wei Lang Mathematics Award for outstanding results in mathematics.
- Dr Chuang Chu Lin Scholarship for 1st in Standard.

Chong Hwa Independent High School — Kuala Lumpur, MY
2020

- Ranked 2 / 914 in 2019, 1 / 900 in 2020.
- Top Scorer in Mathematics and Science in 2019.

WORKS IN PROGRESS

"Topics in Undergraduate Mathematics." Book manuscript in progress. [GitHub]

"Mathematics Olympiad: A Guidebook." Book manuscript in progress. [GitHub]

AWARDS AND HONOURS

Singapore Mathematics Olympiad — 2022 – 2024
Silver awards.

Singapore International Mathematical and Computational Challenge — 2024
Merit award.

Australian Mathematics Competition — 2019 – 2024
Prize awards in 2019, 2021, High Distinction awards in 2022, 2023, 2024.

Malaysian Computing Challenge — 2020 – 2021
Gold awards.

ASEAN Scholarship – Ministry of Education, Singapore — 2020
Awarded to bright young students from ASEAN countries to study in Singapore.

Malaysian Mensa Society — 2020
Membership, Test Reference Number: MY023479.

Hua Lo Geng Secondary School Mathematics Competition — 2019
2nd place, mentioned in Sin Chew Daily 21/08/2019.

Chen Jingrun's Cup Secondary School Mathematics Competition — 2019
1st place, mentioned in Sin Chew Daily 26/04/2019.

EXPERIENCE

SJK(C) Jalan Davidson — Kuala Lumpur, MY
Teaching Assistant — Jan 2025 – Feb 2025

- Assisted in delivering mathematics olympiad lessons to 20+ students between ages of 7 and 8.

Cemerlang Bakti Tuition Centre — Kuala Lumpur, MY
Teaching Assistant — Nov 2022 – Dec 2022

- Developed comprehensive teaching materials for mathematics olympiad training.
- Conducted lessons for students of various ages, delivering structured lesson plans on problem-solving techniques, mathematical reasoning, and critical thinking.

PROJECTS

Different Sizes of Infinity — LaTeX [GitHub]

- Exhibition poster which discusses the cardinality of infinite sets, designed for the Mathematics Week at my school in 2024.

Fires and Hotspots — Python [GitHub]

Presented during Space Faculty Remote Sensing Workshop 2023.

- Conducted geospatial analysis on fire hotspots in South Sumatra using Sentinel-2 and FIRMS datasets, identifying high-confidence fire zones ($> 90\%$ probability) across a large AOI ($\approx 50,000 \, \mathrm{km}^2$).
- Processed multi-spectral satellite imagery, applying True Color, False Color (NIR), and SWIR composites to visualise smoke plumes and burned areas.

CERTIFICATIONS

HackerRank SQL (Basic) Certificate 2025

SKILLS

Computer: Python, SQL (MySQL), LaTeX, HTML/CSS, Excel, Word, PowerPoint

Languages: English (Proficient), Chinese (Proficient), Malay (Fluent), Cantonese (Basic)

Interests: Chess