

# Chai Shao Yang

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## Education

**Anglo-Chinese Junior College** 2024 – 2025

- RP: 70 (J1 Promotional Exam)
- Subjects: H3 Game Theory, H2 Physics, H2 Computing, H2 Mathematics, H2 Economics, H1 General Paper

## Co-Curricular Activities

**STEM Council Vice-President, String Ensemble, ETPS Scholar, ACJC** 2024 - 2025

- Led workshops to convey scientific concepts to children with ASD through exploration of science, art, and music.
- Set and vetted computing questions for the CB Paul Science Quiz.
- Performed in the String Ensemble's annual concert, Kronos.

**Robotics Vice-Chairperson, Fuhua Secondary School** 2020 - 2023

- Organised and facilitated key CCA events such as Secondary 1 Robotics Workshop and CCA Open House.
- Guided juniors by providing information on robotics concepts and good practices.

## Experience

**Student Researcher, Nanyang Technological University** April 2024 – Feb 2025

- Designed an integrated system using Arduino, Raspberry Pi, and computer vision to automate the monitoring and prediction of spinach growth for urban agriculture.
- Built regression and logistic models and performed feature sensitivity analysis.
- Analysed sensor and plant data to identify ideal environmental parameters, informing precision agriculture strategies for enhanced yield.

**Teaching Assistant, School of Robotics (SOR) Pte. Ltd.** Dec 2023 - Jan 2024

- Developed teaching and curriculum materials for the First Lego League, building a strong foundation for programming and good engineering practices.
- Designed and customised hands-on robotics activities for kids at the Robotics Lab in KidZania.

## Skills

Programming Languages: Python, C++, Javascript

AI and Robotics: Pytorch, Scikit-learn, Lego Mindstorms, Arduino, Raspberry Pi

Web Development: HTML/CSS, Node.js, Flask, Bootstrap

Data Analytics: Numpy, Pandas, Matplotlib, Seaborn

## Awards

Singapore Physics League - Silver Award 2025

International Mathematical Modeling Challenge - Honourable Mention 2025

International Mathematical Modeling Challenge (Singapore) - High Distinction 2025

International Elementz Fair - Silver Award 2025

National Olympiad in Informatics - Silver Award 2025

Singapore Young Physicists' Tournament - Distinction 2025

World Robot Olympiad International Türkiye - Senior 29th 2024

World Robot Olympiad Singapore - Senior 1st 2024

Wan Fook Weng Award (top of the cohort) 2024

H2 Computing Book Prize 2024