

# Albert Ng Yu Bo

Rulang Primary School | Class of 2026

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## EXECUTIVE SUMMARY

A high-achieving Primary 6 student with a specialized focus on **Mechatronics, Computational Logic, and Advanced Coding**. Proven success on the international stage as a **WRO Silver Medalist**, combined with a strong foundation in **Mathematics (RMO Distinction)** and **Scientific Innovation**. Currently bridging the gap between hardware and software through a professional **Python development track (Intermediate 4)**.

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## CORE COMPETITION EXCELLENCE

### *Robotics & Engineering*

- **WRO International Finals 2025 (Singapore) | Silver Award**
  - Represented the **Host Nation** in the Robomission Elementary category.
  - Ranked **31st globally** out of 96 elite international teams.
- **WRO National Finals 2025 | Gold Award & 2nd Runner Up**
  - Earned national recognition for mechanical optimization and mission-critical logic.
- **National Robotics Competition (NRC) | 2023 – 2024**
  - Consistent participant in Singapore's premier robotics arena, focusing on autonomous navigation.

### *Mathematics & Logic*

- **Raffles Mathematical Olympiad (RMO) 2025 | Distinction**
  - Awarded Distinction in the **Junior Category (Round 1)**, validating elite problem-solving skills.
- **National Mathematical Olympiad of Singapore (NMOS) 2025 | Honourable Mention**
  - Demonstrated strong competitive performance in high-level algorithmic mathematics.

### *Scientific Innovation*

- **Singapore Youth STEM Fair 2025 | Distinction**
    - Recognized for excellence in applied science and engineering design.
  - **Sony Creative Science Award 2025 | Participation**
    - Explored creative mechanical toy design and basic engineering principles.
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## TECHNICAL SKILLS & TOOLS

- **Software Mastery: Python (Intermediate 4).** Proficient in **Pygame**, logic gates, code optimization, and sprite management. Goal: Completion of Data Analytics track (E2) by end-2026.
  - **Hardware & Making: LEGO Spike Prime (Expert), VEX Robotics.** Skilled in **3D Design & Printing (Bambu A1)** for custom mechanical components.
  - **Communication: Trinity College London Grade 3 Communication Skills (Merit).** Awarded Level 1 Certificate for excellence in articulating technical concepts.
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## NOTABLE PROJECTS

- **Custom WRO Mechatronics:** Prototyped and 3D-printed bespoke robotic attachments to solve complex mission tasks beyond the capabilities of standard kits.
- **Python 2D Simulations:** Developing autonomous "smart" agents in Pygame to test pathfinding algorithms and collision physics.

Scan to view Albert's WRO International Silver Medal run, official certificates, and formal recommendations from The Brainery Code.

