Shaofu Wang

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Education

University of Waterloo *Starting Sep 2025*
B.ASc. in Honours Mechanical Engineering, Co-op Program

Dajing High School Affiliated to SISU *Expected Jul 2025*
Grade 12 Average: **90/100**

Work Experience

Vice President
@ Shanghai Youth Science Research Institute Student Council *Jan 2024 – Present*

- Planned scientific events for **50+** members, collaborating with Tongji University on logistics and execution.
- Led strategic planning for annual outreach programs to promote youth participation in science.
- Managed the 2024 Institute Opening Ceremony's online session, ensuring technical delivery and virtual engagement.

Research Projects

Air-Bubble Drag Reduction for Ship Hulls *2023–2024*

- Conducted hydrodynamic experiments testing hull geometries and air injection rates.
- Analyzed drag reduction efficiency using MATLAB; achieved **20%** improvement over baseline.
- Built and refined scaled models for test tanks; explored applications in green marine tech.
- Awarded First Prize at Shanghai Youth Science Innovation Fair and SJTU Si Yuan Award.

Remote-Controlled Chemistry Lab Device *2022–2023*

- Designed a robotic chemistry workstation using ESP32CAM and Arduino for remote K-12 experiments.
- Enabled safe remote operation of filtration, evaporation, and solubility experiments.
- Potentially benefiting **10+** students and removed exposure to hazardous chemicals.
- Won First Prize at Shanghai Youth Science Innovation Fair; selected for China International College Students' Innovation Competition finals.

Team Leader – Multimodal AI-Based Perception Enhancement System *Aug 2023*

- Led a cross-functional team of 6 in designing a prototype imaging system for low-visibility environments.
- Developed project roadmap, assigned roles, and introduced a team-splitting strategy to resolve internal conflict.
- Oversaw integration of metamaterials and AI fusion of optical and acoustic data to enhance picture quantity.
- Directed demonstration device development and final presentation to senior researchers, receiving top-tier evaluations.

Skills

Software	SolidWorks, AutoCAD, Ansys, Comsol, Cura, MATLAB, LaTeX, Abaqus, Star-CCM+, Dreamweaver
Hardware	Arduino, ESP32CAM, 3D Printing, Laser Cutting, Sensors, Raspberry Pi
Languages	Python, C++, C#, MATLAB, Arduino, HTML, MySQL, JavaScript

Awards

2024	Shanghai Youth Science Innovation Fair – First Prize (¥4000)
2024	Shanghai Science Popularization Education Innovation Award – Third Prize (¥5000)
2023	China Int'l College Students' Innovation Competition (Emerging Track)
2023	"Tomorrow's Technology Star" Competition – Second Prize (¥3000)
2023	Shanghai Youth Science Research Institute – Outstanding Research Nomination
2023	World Laureates Association "Future Scientists" Program – Outstanding Member