

Outreach

MENTORING

Mecatron was founded by a group of students driven not only by a deep passion for learning and innovation, but also by a strong commitment to sharing our knowledge with others. Developing autonomous underwater vehicles (AUVs) deepens members' appreciation for experiential learning, inspiring them to design and lead hands-on workshops aligned with their expertise. These workshops are tailored to engage diverse student audiences, from undergraduates seeking to upskill themselves to younger learners exploring engineering-related career paths.



Computer Vision Workshop

Gaining familiarity and hands-on experience with computer vision technology can unlock many real-life applications & entrepreneurial ventures.

Held over two sessions in September 2024, this workshop introduced 50 undergraduates to the fundamental concepts and practical applications of computer vision. Activities for participants included training a YOLO model and developing a ball-tracking camera.

Blender3D Workshop

Be it for marketing, game asset creation, or prototyping, having the ability to create photorealistic 3D renders is extremely valuable.

Held over two sessions in October 2024, this workshop enabled over 100 undergraduates from multiple disciplines (business, arts & engineering) to familiarise with Blender3D basics. Activities for participants included learning the Physically Based Rendering (PBR) workflow and creating their very own product mockups.



EduBoat Day Camp

This day camp was held from 2nd - 4th June 2025 and supported by the James Dyson Foundation. 33 students from Yuying Secondary School explored mechanical, electronic, and software concepts by building an autonomous boat. The experience gave students a comprehensive, hands-on introduction to STEM through collaboration, creativity, and problem-solving.



3D Printing Pen Workshop

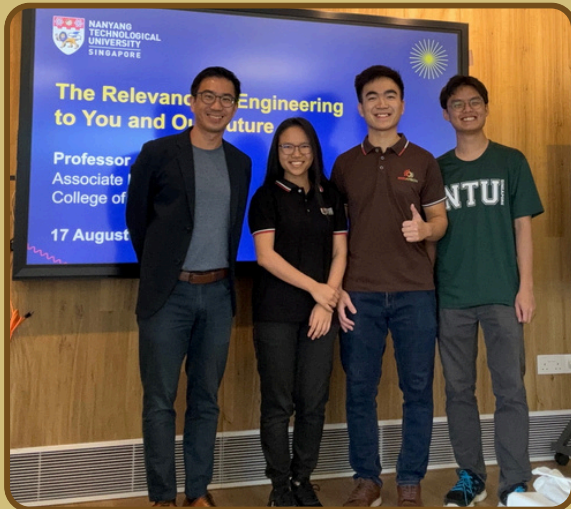
3D printing empowers students to turn ideas into prototypes, fostering creativity & critical thinking, crucial for future innovators.

Held over multiple sessions in June and July 2025, this workshop was tailored to younger learners, introducing over 100 Vietnamese student visitors to 3D printing and design thinking. Activities for participants included using 3D Printing Pens to create 3D objects and presenting their creations to the class.



COMMUNITY ENGAGEMENT

Beyond competitions, Mecatron members are passionate about community engagement to share about their work, their vehicles, and the exciting field of marine technology with others. From school visits to public showcases, members seek opportunities to raise awareness about marine issues and spark curiosity about the real-world applications of marine robotics, such as underwater inspection and ocean monitoring.



Visit by Secondary School Parent Support Group

In August 2024, Mecatron supported the Hwa Chong Institution Parent Support Group (PSG) visit to NTU, where we engaged with a group of ~25 parents of JC2 (pre-university) students. We shared about our work and experiences as an engineering student team, offering insights into student life, academic expectations, and the breadth of innovation opportunities available at NTU.

WorldSkills Singapore 2025

In collaboration with Singapore Maritime Foundation, Mecatron hosted the “Marine Tech in Action: Exploring the Real-World Applications of Marine Vehicles” workshop, attended by ~80 participants from all walks of life. Participants had an up-close look at our marine vehicles and tried out our underwater ROV interactive, gaining an appreciation for the rapidly evolving field of marine tech.



Visit by Asahi Glass Corporation

In June 2025, Mecatron’s founder (Vu Tien Luc) gave a presentation about our team, our passion for marine robotics, and our current vehicle development progress. The overseas visitors from Asahi Glass Corporation appreciated our team’s dedication to innovation and gained valuable insights on our iterative prototyping process through this enriching sharing session.

NTU ‘Live It Up’ Event

Organised by the College of Engineering, Nanyang Technological University, this 3-day event in August 2025 aims to “bring engineering to life” for pre-university students, with interactive exhibitions, exciting workshops and informative sharing sessions. Mecatron will be hosting a “DIY Robotic Arm Workshop” where participants assemble and program their very own robotic arm from provided parts. We hope to spark students’ interest in engineering, encouraging them to consider it not just as a field of study, but also as a potential career path.

