TAN YONG JIE

+65 81260458 | Tan_Yong_Jie@outlook.com | https://www.linkedin.com/in/yong-jie-tan/ | https://yongjiee.github.io/

EDUCATION

Singapore Institute of Technology
Bachelor of Engineering with Honors in Robotics Systems **Sep 2024 - Present**

Nanyang Polytechnic
Diploma in Robotics & Mechatronics Engineering **Apr 2019 - Mar 2022**

- Graduated with a Grade Point Average of 3.54
- Awarded Director List for 3 semesters

Institute of Technical Education
Higher National ITE Certificate in Mechatronics Engineering **Apr 2017 - Mar 2019**

- Awarded Director List for 3 semesters
- Graduated with Certificate of Merit and Outstanding Graduate Award in 2019

EXPERIENCE

Kodecoon Academy
Teacher **May 2024 – Mar 2024**

- Coached students for robotics competitions including First Lego League (FLL) and National Robotics Competition (NRC) using SPIKE Prime and block-based programming.
- Cultivated problem-solving, creativity, and collaboration skills in students aged 9 to 15.

Singapore Police Force
Ground Response Force (Full-Time National Service) **May 2022 – May 2024**

- Performed counter duties such as lodging police report, provide feedback and advise, and attending to police emergency hotline calls.
- Performed ground patrolling to ensure the safety of the neighborhoods and being the first responder to police emergency hotline.

COMPETITION EXPERIENCE

Worldskills Singapore National Competition, Mechatronic **2018, 2020-2021**

- Awarded the Medallion of Excellence in Mechatronics in 2020 and 2021 competition
- Collaborated in a 2-person team to design, assemble, and program modular industrial automation systems using PLC, HMI, pneumatics, and robotics.
- Utilised Panasonic Programmable Logic Controller (Ladder diagram and Sequential function chart)

PROJECT

ROS Navigation with Limo Robot - [Portfolio] https://yongjiee.github.io/project/sep1 **May - Jul 2025**

- Utilised ROS1, RTAB-Map SLAM and navigation stack on Limo robot
- Tuned costmaps and planners for Navigation
- Integrated depth camera, lidar for mapping and obstacle avoidance
- Used Rviz and ROS tools for live debugging and trajectory visualization

SKILLS & INTERESTS

- Language: English & Mandarin (Spoken & Written)
- Technical skills: SLAM (Simultaneous Localization and Mapping), LiDAR-based Localization, EKF (Extended Kalman Filter) and Sensor Fusion
- Visualisation and Simulation Tools: RViz and Gazebo
- Programming & Software skills: C, C++, Python, ROS (ROS1), Linux Development, Git (Version Control)
- Leadership skills: Responsible, Honest, Strong Team Collaboration, Technical Communication, Problem Solving
- Interests: Enjoys cycling and music