

YANG XUEHUAN (Singapore Permanent Resident)

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EDUCATION

Nanyang Technological University (NTU), Singapore Jan 2020 - Jan 2024

Ph.D, School of Computer Science Engineering, Cyber Security Lab@NTU

- Research Interests: Autonomous Vehicle and Cyber Security

Nanyang Technological University (NTU), Singapore Aug 2016 - Dec 2019

Bachelor of Engineering (Electrical and Electronic Engineering)

- Graduate with **Honours (Distinction)**
- Project: Interfacing and Testing of Localization Sensors on An Autonomous Vehicle

RESEARCH EXPERIENCE

Centre for Cyber Security Research Centre @ NTU, Singapore Feb 2020- Present

Research Department, Research Assistant, Cyber Security Team

- Research Topics: Self-driving cars of deep learning systems in a wide variety of scenarios, especially in safety-critical applications
- Research Direction: It's crucial for building trust and reliability of AI systems in day-to-day decision making

Centre for Autonomous Robotics Lab,EEE,NTU,Singapore Jan 2019- Dec 2019

Research Department, Autonomous Vehicle Localization Team

- **Individual Final Year Project:** Interfacing and Testing of Localization Sensors on An Autonomous Vehicle (FYP No: A1242-182)
- The project focuses on Safety and Cyber Security of driverless cars, in cooperation with Singapore Defense Science and Technology Agency (DSTA), ordered by Singapore ministry of defense (Future Systems & Technology Directorate FSTD)
- Success tested autonomous vehicle localization in CETRAN,Singapore
- Success collaborated Velodyne LIDAR & Delphi RADAR with existing software(ROS) and making necessary modifications with autonomous vehicle software (Autoware)
- Success applied Object Detection and Object Avoidance Algos for Toyota Coms Car
- Success tested the performance of Localization sensor in outdoor environment at different distances and reported the result of the observations

Center for Energy Research Institute@NTU, Singapore
Research Department, Future Mobility Team

Sep 2018 - Dec 2019

- Joined NTU-Volvo-LTA 12-meter autonomous electric bus team
- Tested NTU-JTC-Navya autonomous shuttle bus on NTU's campus
- Success developed lane detection algorithms for advanced driver assistance system
- Success acquired and analyzed 3D stereo camera (ZED) vision data using Nvidia CUDA
- Success integrated recognized obstacles using deep learning frame

WORK EXPERIENCE

Singpilot Pte Ltd, Singapore

Jun 2018 - Aug 2018

Software Engineer, R&D Department, Sensor Experts Team

- Join the team to supply and delivery of One unit of Autonomous Vehicle to Temasek Laboratories@Nanyang Technological University, Singapore
- Success customized ros_localization package for a driverless vehicle and navigation software to enable the vehicle to move autonomously using GPS, LIDAR and IMU
- Success built the height warning system using LIDAR for Changi Airport, Singapore

CO-CURRICULAR ACTIVITIES

Safety Officer, Main Committee, Inline Skating Club@NTU Aug 2018 - Dec 2019

- Success taught basic safety skills for inline skating club skaters
- Success took care the sick or injured person during Inline skating lessons and activities
- Success prepared and analysed risk and management for training sessions and events

ACHIEVEMENTS - Professional Inline Skating Coach Under Sport Singapore

- Certificate: Singapore Coach Theory Level One by Sport Singapore
- Certificate: International Inline Certification Program (ICP) Level One
- Certificate: Basic Sports Science by Sport Singapore

SKILLS

- **Operating System:** Ubuntu (Advance), Windows (Intermediate), MacOS (Elementary)
- **Singapore Driving License:** Class 3
- **Math Skills:** 3rd Place, Chinese Mathematics Olympiad (CMO) Competition hosted by Chinese National High School Mathematics League