JIANING LIN

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EDUCATION BACKGROUND

University of Michigan-Ann Arbor — Ann Arbor, Michigan, United States
Master of Science, Electrical and Computer Engineering (Robotics) — Sept. 2019 - June 2021

- **GPA:** 4.0/4.0
- **Major Courses:** Robotics Sys Lab(A+), Mobile Robotics(A), Self-driving Car(A), Machine Learning(A).

Zhejiang University — Hangzhou, Zhejiang, China
Bachelor of Engineering, Information Engineering(**GPA:** 88.2/100, Top 5%) — Sept. 2015 - June 2019

PROFESSIONAL EXPERIENCES

PVRD Intern, Isuzu Technical Center of America — May 2020 - Present
Autonomous Driving Related Work — *Advisor: Dr. Yong Sun*

- Built an ROS interface for the simulation software to virtually test perception and localization algorithms.
- Integrated a real-time LiDAR-based perception algorithm into trucks' ADAS systems to detect surrounding pedestrians and vehicles.
- Implemented a LiDAR-based localization algorithm for trucks to calculate self locations and build maps.

Research Assistant, IV Lab, Zhejiang University — June 2018 - June 2019
SLAM Related Work — *Advisor: Dr. Jianke Zhu*

- Built an mobile platform for SLAM, employed STM32 microprocessor to control the chassis
- Implemented Google Cartographer, VINS, ORB SLAM2 on the platform with Nvidia TX2, LiDAR, ZED camera, Realsense camera and IMU
- Combined Mask R-CNN with SLAM to generate a large-scale semantic map for automobiles, which includes the class and orientation of objects

SELECTED PROJECTS

SuMaEM: Efficient LiDAR-based Semantic SLAM with EM ICP — Feb. 2020 - Apr. 2020
Computer Vision Related Work — *Advisor: Dr. Maani Ghaffari Jadidi*

- Improved the original Semantic ICP in SuMa ++ with Semantic ICP through Expectation-Maximization to reduced the rotation error and translation error of the original SuMa ++.
- Project Website: http://www-personal.umich.edu/~zeph/sumaem.html

ROB 535 Self-driving Car In-class Competition — Oct. 2019 - Dec. 2019
Computer Vision Related Competition — *Advisor: Dr. Matthew Johnson Roberson*

- **TOP 1** out of 19 Teams in image classification task and **TOP 3** out of 13 Teams in vehicle localization task.
- Combined Semantic information from image with the LiDAR point cloud for vehicle detection and localization.
- Github Link: https://github.com/undefinedzero/SelfDrivingCar-Perception-Project

Robomaster 2018 Robotics Competition — Oct. 2017 - July 2018
Embedded System and Computer Vision Related Competition — *Advisor: Dr. Xihua Li*

- Developed the electronic system of a robot named HERO, including precise motor control, sensor data analysis and visual based target tracking.
- Github Link: https://github.com/HelloWorldTeam

AWARDS & HONORS

Academic Scholarship of Zhejiang University (top 3%) — 2016, 2017, 2018
Outstanding Graduates of Zhejiang University — 2019
Second Price of Robomaster Robotics Competition — 2018, 2019

SKILLS

Programming language: C/C++, Python, Matlab, Verilog
Language: Chinese (native), English (fluent)