

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

- **Overall GPA:** 4.0/4.0
- **Major Courses:** Math for Robotics(A), Self-driving Car:Perception and Control(A), Machine Learning(A), Advanced Computer Vision, Mobile Robotics, etc.

Zhejiang University

Hangzhou, Zhejiang, China

Bachelor of Engineering, Information Engineering

Sept. 2015 - June 2019

- **Overall GPA:** 88.2/100 (Top 10%)
- **Selected Courses:** C Programming(94), Algorithm Design(92), Digital System Design(94), Signal & System Level A(92), Microprocessors & Interfacing(96), Digital Image Processing(90), etc.

SELECTED COMPETITIONS

ROB 535 Self-driving Car Kaggle Competition

Oct. 2019 - Dec. 2019

Computer Vision Related Competition

Advisor: 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 image with 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

- Responsible for 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>

PROFESSIONAL EXPERIENCES

IV Lab, College of Computer Science and Technology, ZJU

June 2018 - June 2019

SLAM Related Work

Advisor: Dr. Jianke Zhu

- Rebuilt an automobile platform for SLAM, employed STM32 microprocessor to control the chassis
- Implemented Google Cartographer, VINS, ORB SLAM2 on the automobile 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

VLSI Lab, Tokyo Institute of Technology

July 2017 - Aug. 2017

FPGA Related Work

Advisor: Dr. Dongju Li

- Analyzed the structure and the instruction set of the given CPU
- Modified the CPU and finished a FPGA communication system project via assembly language

Shanghai Advanced Research Institute, CAS

Data Analysis Related Work

Feb. 2017 - Mar. 2018

Advisor: Dr. Jianming Wei

- Simulated the toxic gas leakage diffusion model in large-scale environment through Fluent software
- Analyzed the sensors data to better calculate the post-leakage diffusion and tailor the optimal rescue plan

SELECTED PROJECTS

Power Runes Recognition

May 2018

Computer Vision Related Project

Advisor: Dr. Zhiyu Xiang

- Derived from Robomaster 2018 Robotics Competition Technical Challenge
- Finished a program to recognize hand-writing digits in the real environment
- Github Link: <https://github.com/undefinedzero/Power-Runes-Recognition>

Image Restoration based on GAN

May 2017 - Apr. 2018

Student Research Training Program

Advisor: Dr. Weidong Wang

- Proposed a new GAN based method for restoring characters in damaged books, such as ancient bible
- Built a dataset containing good characters and broken characters from ancient books
- Learned and Used Tensorflow to implement GAN; Built a network based on cycle-GAN

Design of Pulsimeter

July 2017

Embedded System Related Project

Advisor: Dr. Xihua Li

- Designed the pulsimeter using microprocessor and self-designed circuit
- Finished hardware schematics, PCB and circuit board hardware debugging
- Achieved a accurate result in measuring pulses

Design of "Music Conductor" with FPGA

May 2016

FPGA Related Project

Advisor: Dr. Zhiguo Shi

- Learned VGA protocol, Vivado IDE and Verilog
- Designed the display module of the system to show the lyrics of the song

AWARDS & HONORS

First Class Academic Scholarship of Zhejiang University (top 3%)	2016
Second Class Academic Scholarship of Zhejiang University (top 10%)	2017
HNA scholarship	2018
Outstanding Graduates of Zhejiang University	2019
Second Price of Robomaster Robotics Competition	2018, 2019

EXTRACURRICULAR ACTIVITIES

Director of Operation Dept., DJI Club

Sept. 2016 - June 2017

- Dedicated to holding annual drone competitions, which attracts more than 200 students every year

Director of Academic Dept., College Student Union

Sept. 2016 - June 2017

- Responsible for organizing diverse activities, e.g. new years gala, girls day, student representative meeting, etc.

PROFICIENCY & INTERESTS

Programming language: C/C++, Python, Matlab, Verilog

Language: Chinese (native), English (fluent)