JIANING LIN

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University of Michigan, Ann Arbor, 48105

EDUCATION BACKGROUND

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

- **Major Courses:** Math for Robotics, Self-driving Car:Perception and Control, Machine Learning, 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.

AWARDS & HONORS

First Class Academic Scholarship of Zhejiang University (top 3%)	2016
Second Class Academic Scholarship of Zhejiang University (top 10%)	2017
ISEE-Dahua Stipend Award	2017
Honorable Winner of the Mathematical Contest in Modeling	2018
Third Price of Robomaster 2018 Robotics Competition	2018
HNA scholarship	2018
Outstanding Graduates of Zhejiang University	2019
Third Price of Robomaster 2019 Robotics Competition	2019

SELECTED COMPETITIONS

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

- Designed and built robots for battles, entered the **Top 16** out of 48 teams of central competition area and **Top 40** out of 200 teams in the final
- Responsible for the electronic system of a robot named HERO, including precise motor controlling, sensor data analysis and target tracking.
- Designed a vision based tracking system which allowed the robot to automatically track its opponent.
- 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-RCNN and 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   Feb. 2017 - Mar. 2018
Data Analysis Related Work   *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

EXTRACURRICULAR ACTIVITIES

Director of Operation Dept., DJI (Drone) 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: Verilog, C/C++, Python, Matlab
Language: Chinese (native), English (fluent)
Interests: Table Tennis, Soccer, StarCraft II