

ZIJIAN LUO

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EDUCATION

National University of Singapore

Jan. 2021 - Present

Master of Science(Electrical Engineering)

GPA: 4.00/5.00

Department of Electrical and Computer Engineering

University of Electronic Science and Technology of China

Sept. 2016 - June 2020

Bachelor of Engineering(Internet of Things Engineering)

GPA: 3.68/4.00

School of Information and Communication Engineering

HONORS & AWARDS

Scholarship for Outstanding Students, UESTC

Mar. 2019

Excellent Concluding Report, National Students' Innovation and Entrepreneurship Project

Sept. 2018

Meritorious Winner,US Interdisciplinary Contest in Modeling (ICM)

Mar. 2018

Third Prize Award of Mathematical Modeling Contest, UESTC

June 2017

Scholarship for Outstanding Students, UESTC

Mar. 2017

PROFESSIONAL EXPERIENCE

Python Course Intern, SimpleCloud Tech

Jan. 2019 - Apr. 2019

- Designed Python advanced algorithm course in the online education platform Shiyanlou
- Currently there are 5889 students have studied my courses

Summer School, National University of Singapore

June 2018 - Aug. 2018

- Entrepreneurship and Innovation, ISPACE
- Innovation Management Program, Faculty of Engineering

Winter School, University of Oxford

Jan. 2017 - Feb. 2017

- Oxford Study Program, Merton College

RESEARCH EXPERIENCE

Jellyfish network in AWS

Oct. 2021 - Nov 2021

- Advisor: Ben LEONG(NUS)
- Based on the structural characteristics of the Jellyfish network, I designed a server network construction solution for the campus data center of NUS Computing Department.
- I have completed the simulation of the network structure of the order of $k=12$ on AWS, that is, the network service of instant communication with 2304 servers, to achieve high robustness
- Implemented the kernel compilation of MPTCP protocol on Ubuntu servers, which makes the communication efficiency much higher than the single TCP protocol.

3D Human Pose Estimation Algorithm

Oct. 2019 - June 2020

- Thesis Supervisor: Zeng Liaoyuan(UESTC)
- Designed this estimation algorithm that adopts two-stage 3D human pose estimation method, and the training neural network model is based on hourglass network structure.
- Based on the principle of camera imaging, combined with the single hole imaging model, the 3D coordinate of human posture is constrained geometrically.
- Trained the model in MPII dataset and finally achieved less average joint error(56mm) than the stacked hourglass network at the same type.

WeChat Mini Program of UESTC Campus Map

Feb. 2019 - July 2019

- This product is serviced for all our students and teachers. We add some special functions that users can make comment and recommendations on the base interface from Tencent Map. UESTC Campus Map finally put in use and get some praise.
- As the team leader, my duty is to coordinate the team with the work allocation and process track.
- Designed the Django framework in its database and final declaration procedure.

QPSK Full Duplex Communications System

Sept. 2018 – Nov. 2018

- Advisor: Fu Zhizhong(UESTC)
- Based on FPGA platform,combined with QPSK principle,this communication system supports both compressed file and full duplex voice transmission.
- Set up communication simulation leveraging MatLab on FPGA platform and actual link, including receiving and transmitting antenna.

RELEVANT COURSES

- Master Degree(NUS)

Completed Courses

Stochastic Process(4.5/5.0)

Neural Networks (4.0/5.0)

Computer Network(4.0/5.0)

Convex Optimization for Electrical Engineering (4.0/5.0)

Real time System (4.0/5.0)

Information Theory and its Application(4.0/5.0)

Pattern Recognition

Advanced Computer Network

Multiprocessor System

Selected Topics in Industrial Control(4.0/5.0)

- Bachelor Degree(UESTC)

Mathematics Related Courses

Calculus (4.0/4.0)

Linear Algebra and Space Analytic Geometry (4.0/4.0)

Probability and Statistics (4.0/4.0)

Professional Core Courses

Principle of Communication (3.9/4.0)

Signals and System (4.0/4.0)

Blockchain Technology (4.0/4.0)

Network Security (4.0/4.0)

Information Security (4.0/4.0)

MISCELLANEOUS

Computer Languages

Software & Framework

OS

C/C++, Python, MatLab, Golang, Latex

Pytorch, Pandas, Numpy

Linux, Windows