Yu Shi

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EDUCATION

PEKING UNIVERSITY Beijing, China 9/2018–present

School of Electronics Engineering and Computer Science

- Major in Electronics and Information Engineering, Overall GPA: **3.573/** 4.000 (Freshman**3.41**, Sophomore**3.59**, Junior**3.85**)
- Programming & software: MATLAB, Cadence Allegro, Python, C++, Verilog; Latex, Origin
- Languages: GRE 323

Main Course and Score

Principle of Communications (Honor Track)	96	Basic Electronics Lab	86
Introduction to Electromagnetic Big Data	95	Elements of Information and Coding Theory	88
Electrodynamics (B)	94	Methods of Mathematical Physics	87
Microprocessor and Interface Technology	94	Machine Learning	87
Advanced Mathematics (I)/(II)	84/91	Signal and System (Honor Track)	86
Computer Aided Design for Electronic Circuits	91	Analysis and Design of Analog Circuits	86
Python Programming and Application	95	Digital Circuit Design (Honor Track)	83
Virtual Reality Content Creation	90	Experiment on Intelligent Hardware Applications	84
Digital Signal Processing	89	Smart Device Design Project	87

RESEARCH EXPERIENCE

3D Point Cloud Processing System and Algorithm 6/2020-2/2021

Independent Research, Supervised by Prof. Chuanchuan Yang, Institute of Advanced Optical Communication Systems and Networks, Peking University

- Mastered the theory of point cloud inpainting techniques applied in LiDAR data
- Reproduced the simulation result of inpainting method using the local smoothness and the non-local self-similarity
- Proposed an improved point cloud inpainting method with normal-based feature matching strategy

3D Point Cloud Reconstruction and Volume measurement 6/2021-present

Independent Research, Supervised by Prof. Chuanchuan Yang, Institute of Advanced Optical Communication Systems and Networks, Peking University

- Designed to propose a point cloud processing system to reconstruct 3D models like human faces and measure the volumes

PUBLICATIONS

Y. Shi. A method and device for signal repairment and enhancement. 202110172219.X (Pending)
Y. Shi, C. C. Yang. Point Cloud Inpainting with Normal-based Feature Matching. Multimedia Systems. (Under review)
Y. Huang, C. C. Yang, **Y. Shi**, H. Chen. PLGP: Point Cloud Inpainting with Patch-based Local Geometric Propagating. The Visual Computer. (Under review)

SELECTED COURSE PROJECT

PWM Modulation System

- Mastered the basic principles of PWM modulation in communication systems
- Designed and optimized the circuit system diagram to implement PWM modulation

Mask detection based on Faster Region-Convolutional Neural Network (R-CNN)

- Surveyed about R-CNN, Fast R-CNN, Faster R-CNN, YOLO and SSD
- Trained a PyTorch implementation of R-CNN model to detect whether people were wearing masks

Automatic pet feeder system based on Raspberry Pi 4b

- Implemented an intelligent electronic system functioning as an automatic pet feeder which can be controlled by web page
- Realized the design of Printed Circuit Board (PCB) and debug of sensor in the group