CV

Zicong JIANG

Gender: Male | Date of birth: 1999/04/15

Tel: +86-158-6782-4015| Email: 15867824015@163.com

Address: No.13 Congyuan Road, Zhenhai District,Ningbo, Zhejiang Province, P. R. China, 315200

EDUCATION

Sep.2017 – Jun. 2021 **Northeast Electric Power University, China**

Bachelor degree, Major: Communication Engineering

GPA: 3.55/4.0, Ranking: 5/80

MAJOR COURSES

Circuit Analysis	88	Advanced Language Programming	91
Digital Signal Processing	96	Information Theory Foundation	92
Communication Principles	83	Electromagnetic Field and Transmission Theory	81
Analog Electronics	90	Microprocessor and Interface Technology	94
Signals and Systems	88	Microwave Technology	93
Wireless Communications Principles	84	Communication Network Basics	87
Data Structure	91	Data Communications and Networks	86

RESEARCH EXPERIENCES

1. Radio Frequency Energy Harvesting System 2019.09-2020.07

School of Information Engineering, Northeast Electric Power University, CHINA

Advisor: Prof. Jianpo Li

- Designed a multi-band, wide-band, high-gain microstrip antenna to efficiently collect RF energy in the frequency band mainly at 915MHz or 2.4GHz, and designed a matching circuit and voltage doubler rectification circuit which finally enables the system to be applied to low-power devices such as Zigbee.
- Researched the application of metamaterials technology in antennas to achieve better performance while ensuring miniaturization, and used intelligent algorithms for antenna structure.

2. Deep Learning-based Transmission Line Detection System 2019.08-2021.07

School of Information Engineering, Northeast Electric Power University, CHINA

Advisor: Prof. Liquan Zhao

- Designed a pair of smart glasses based on Raspberry Pi, which can realize the remote transmission of information (video, audio, text, photo, image and voice control), and real-time fault detection in the smart glasses terminal to give feedback for better maintenance.
- Improved the YOLOV4-tiny target detection algorithm such as proposing a new network structure and postprocess approach to have higher accuracy and high computational speed, and GAN algorithm is used to create my own Insulator-Defect Datasets. Eventually I deploy it on Raspberry Pi for real-time transmission line fault detection
- Alibaba Cloud server is used to build NodeJS server, and STUN / TURN server was used to achieve NAP penetration of two devices in different network environments.
- Used Webrtc to easily implement voice and video calls. For the function of taking photos, the canvas command is used to intercept and draw the video in the video frame. Base64 encoding is used to encode the picture which is transmitted through p2p together with text.

3. Remote Environment Monitoring System Based on Qt and BeiDou Satellite 2019.04-2019.07

School of Information Engineering, Northeast Electric Power University, CHINA

Advisor: Prof. Jianpo Li

- Designed a software that uses “BeiDou” data transparent transmission to realize the reading of various sensor data in remote environments through wireless transmission and real-time monitoring of the environment.
- Used QtCreator software for the development (Qt uses C++ for programming), RS485 bus to read data by wire, and then connectted BeDou to realize BeiDou communication.
- On the basis of the RS485 bus, three different sensors can be read and recorded at one time. The sensor to be read and the corresponding reading interval can be set separately. The function of automatically searching the port and configuring the device number is realized.. On the basis of realizing wired reading, BeiDou transparent transmission is used to achieve short-range wireless data collection.

CAMPUS ACTIVITIES

2018.09-2019.09 Hardware Department, Electric Practice Innovation Center, Northeast Electric Power University
Team leader of Smart Car

- ✧ Organized and participated in various scientific and technological competitions at school and college level.
- ✧ Hold various courses to train students, introduced extracurricular knowledge related to electronics, including simple hands-on practices such as welding and designing a track car.

2018.09-2021.07 Robot Studio of Northeast Electric Power University
Member of Drone Group

- ✧ Researched on various robot technologies, including biped robots, quadruped robots, drones, etc.
- ✧ Conducted self-study on machine vision and other knowledge, and participated in related competitions.

AWARDS & HONORS

2017 Second-class Scholarship of Northeast Electric Power University
2017 Third-class Award of National English Competition for College Students
2018 Innovation Third-class Scholarship of Northeast Electric Power University
2018 Second-class Scholarship of Northeast Electric Power University
2018 Third-class Award of "Changtong Cup" Electronic Design Competition
2018 Excellent League Member of Northeast Electric Power University
2019 Innovation First-class Scholarship of Northeast Electric Power University
2019 Championship of Jilin Provincial University Robot Competition
2019 Second-class Scholarship of Northeast Electric Power University
2019 Second-class Award of National Undergraduate Electronics Design Contest
2019 First-class Award of China Robot Competition
2019 Excellent League Member of Northeast Electric Power University
2020 Second-class Award of Chinese Undergraduate Computer Design Contest in Jilin Province
2020 First-class Award of The "Challenge Cup" in Jilin Province
2020 Third-class Scholarship of Northeast Electric Power University
2020 Outstanding Student of Northeast Electric Power University
2021 Excellent Graduation Thesis at Northeast Electric Power University
2021 Excellent League Member of Northeast Electric Power University

PUBLICATIONS

[1] **Zicong Jiang**, Liquan Zhao, Yanfei Jia. Design of transmission device inspection auxiliary management system based on raspberry pi. ICITEE-2019: Proceedings of the 2nd International Conference on Information Technologies and Electrical Engineering. December 2019 Article No.: 130 Pages 1–4. https://dx.doi.org/10.1145/3386415.3387077

[2] **Jiang Z,** Zhao L, Li S, et al. Real-time object detection method based on improved YOLOv4-tiny[J]. arXiv preprint arXiv:2011.04244, 2020.https://arxiv.org/abs/2011.04244?context=cs.CV

[3] Li-Quan Zhao, Yu-Peng Zhang, Zi-Ming Teng, **Zi-Cong Jiang**, Ying Cui, Zhong-Feng Kan. Conditional adversarial domain adaption based on self-attention[J]. Journal of Network Intelligence (JNI), JNI-0271

[4] Yanfei Jia, Guangda Chen, **Zicong Jiang**, Miao Yang and Liyun Xing. A lightweight fast object detection method[J]. Journal of Network Intelligence (JNI), JNI-0210

[5] Liquan Zhao, **Zicong Jiang**, Yanfei Jia. Defective insulator detection based on improved YOLOv4[J] IEEE Sensors Journal (Under review)

[6] Liquan Zhao, Leilei Wang, **Zicong Jiang**. A Lightweight network based on dual-core structure[J] Information(Under review)

[7] Software Copyright Registration Certificate: Jianpo Li, **Zicong Jiang**, Yuxiang Gao. RS485-based Environmental Monitoring Information Management System. Registration No.: 2020SR0282369. Completion date: 2020-01-07.

PROFESSIONAL SKILLS

Languages: English (TOEFL 111, TOEIC 800, CET-6 500), Japanese (JLPT-N2 119)
Programming Software: Matlab, Pytorch, Qt Creator, Keil, Multisim, ADS, HFSS , Altium Designer
Programming Language: C, Python, C++, C#
Instruments: IOTA-1200 IoT analyzer, GDS-1104B oscilloscope, NI PXIe-1075, Raspberry Pi, STM32 / STC89C51 series microcontrollers