

# Jiaqi Yang

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## EDUCATION BACKGROUND

**Xi'an Jiaotong-Liverpool University**  
BEng Telecommunications Engineering

**Suzhou, China**  
09/2020-06/2024

**Core Modules:** Electronic Circuits and Systems, Advanced Electrical Circuits and Electromagnetism, Continuous and Discrete Time Signals and Systems, Experimental Computer Skills and Sustainability, Electromagnetism and Electromechanics, Engineering Mathematics, C Programming and Software Engineering, etc.

## INTERNSHIP EXPERIENCE

**Suzhou Binke Environmental Technology Co., Ltd**  
Wireless Communication Intern

**Suzhou, China**  
12/2022-02/2023

- Participated in the design, testing, and optimisation of the wireless communication module of the company's intelligent environmental monitoring system, using ZigBee, LoRa, and NB-IoT technologies; Selected the wireless communication protocol and the configuration of parameters.
- Assisted in the planning, deployment, and maintenance of the company's wireless communication network and was responsible for the evaluation and improvement of communication quality at several monitoring points.

**Suzhou Xingchuan Gardening and Greening Co., Ltd.**  
Wireless Communication Intern

**Suzhou, China**  
07/2022-09/2022

- Participated in the development, integration, and debugging of the wireless communication module of the company's intelligent horticultural irrigation system, using Bluetooth, Wi-Fi, and 4G technologies.
- Responsible for the software development and programming of the company's wireless communication module, using C, Python, and Java to realise the data interaction between the module and the sensor, controller, and cloud, and the sending and receiving of control instructions.

**Shanghai Wiwide Network Technology Co., Ltd.**  
Wireless Communication Intern

**Shanghai, China**  
01/2022-03/2022

- Participated in the development, verification, and improvement of the wireless communication module of the company's smart home system, using Wi-Fi, BLE, and Z-Wave. Completed the design and production of the circuit diagram and layout diagram of the module, using PCB design and plate-making tools.
- Completed the compatibility test and certification of the company's wireless communication module and used standardised test methods and equipment to test and certify the compatibility, interoperability, and compliance of the wireless communication module.

## RESEARCH PROJECT

**Modified Dipole and Patch Antennas with Metamaterial**

07/2023-09/2023

- Developed a circular ring patch antenna with strategically placed gaps, achieving circular polarisation; utilised CST Microwave Studio for simulation and optimisation. Enhanced polarisation by adding a nested ring results in a wider axial ratio bandwidth; conducted parametric simulations for design optimisation.
- Achieved a targeted frequency band of 22–29 GHz with a 3.8 GHz 3 dB axial ratio bandwidth; optimised design for a peak gain of -4.5 dBi and a half-power beamwidth exceeding 75 degrees.

**Design and Simulation of Simultaneous Wireless Information and Power Transfer**

07/2022-09/2022

- Participated in a research project on Simultaneous Wireless Information and Power Transfer (SWIPT), which is a new wireless communication method that can transmit energy to wireless devices while transmitting information, reduce the cost of wires and cables, and avoid the trouble of replacing batteries.
- By reading the antenna-related literature, understood the basic principle and design method of the antenna, mastered the use of CST software, completed the tasks of two simulated antennas, and analysed and optimised the performance parameters of the antenna.

## EXTRACURRICULAR ACTIVITIES

**Speech and Eloquence Association**  
Head of Organisation Department

**Suzhou, China**  
01/2021-01/2022

- Organised activities such as XJTLU Speakers, Speech Corner, and the Club Culture Festival. Responsible for the planning, publicity, venue, materials, personnel, and other aspects of the activities, ensuring the smooth and high-quality completion of the activities.
- Led a team of 5 members to organise the club culture festival activities, designed some interesting games and interactive sessions, showed the characteristics and style of the club, stimulated the interest and enthusiasm of the students, effectively enhanced the popularity and influence of the club, and recruited 15 people for the club.

## SKILLS/INTERESTS

**Language:** Chinese: native; English: fluent;

**Professional skills:** Word, Excel, C, Python, Matlab, CST STUDIO SUITE, LTspice