LIHAN ZHENG

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EDUCATION

Shanghai Jiao Tong University (SJTU)   *June 2026 (expected)*

B.Eng in Information Engineering

GPA: 3.93/4.3 Score: 90.92/100 Rank: 10/132

Related courses: Mathematical Methods of Electronic Engineering(97/100), Principles of Communication(96/100), Advanced Mathematics II(96/100), Digital Signal Processing(95/100), Machine Learning(93/100), Reinforcement Learning, Signals and Systems, Wireless Communications Principles

RESEARCH INTERESTS

My research interests focuses on integrating machine learning with wireless communications to develop intelligent AI-driven solutions for next-generation communication systems.

EXPERIENCE

Hybrid Precoder Design Based on DRL   **Feb 2025 - Present**

Supervisors: Assoc. Prof. Qingqing Wu   SJTU

· Conducted literature review on related research topics and reproduced several relevant GitHub projects.

· Proposed an innovative hybrid precoder architecture to optimize spectral efficiency and BER.

· Built network to design the analog and digital precoder based on deep reinforcement learning.

· Compared this method with the previous OMP, KKT, PE-Alt-Min and CNN methods and analyze.

Smart Driver Moniter System Based on IoT   July 2024

Supervisors: Assoc. Prof. TAN Wee Kek   NUS SoC Summer Workshop

· Github: https://github.com/8zym/AIOT_group3

· Perception Layer: Developed a sensor network including five components to collect fatigue-related data.

· Network & Platform Layer: Processed sensor data using RPi and ESP32, transmitted data via MQTT protocol, deployed EMQX-based cloud server, used a local computer for pre-training, and managed data storage on Alibaba Cloud.

· Application Layer: Built a responsive front-end website with real-time data visualization and camera streaming using WebSocket and MJPG-Streamer.

AWARDS

National Scholarship, awarded by Ministry of Education, PRC	*Dec 2024*
The Third Prize of CUMCM, awarded by Shanghai Municipal Commission of Education	*Nov 2023*
The Second Prize Scholarship, awarded by Shanghai Jiao Tong University	*Fall 2024*
The Third Prize Scholarship, awarded by Shanghai Jiao Tong University	*Fall 2023*

SKILLS/HOBBIES

Programming Languages	Python, C/C++, MATLAB
Machine Learning Tools	Pytorch, Sklearn, Pandas, Numpy
Hobbies	working out, playing Chinese flute and writing