Fanyi Meng

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🎓 Education

The Chinese University of Hong Kong(Shenzhen) (CUHKSZ)   2023 – Present
M.phil student in Computer and Infomation Engineering (CIE) , expected March 2025

Southern University of Science and Technology (SUSTech)   2019 – 2023
B.S. in Electrical and Electronic Engineering (EEE) , Communication Engineering
- GPA : **3.47 / 4** (85 / 100)

👥 Experience

Southern University of Science and Technology   Oct.2020 – Feb.2023
Undergrad Research Assistant   Supervisor: Rui Wang

Project with **HONOR**
- Applied **Reinforcement Learning** to optimize the Age of Information (AoI) in an IoT system,
- Utilized **MATLAB's WLAN Toolbox** for simulation of the Distributed Coordination Function (DCF) within the Wi-Fi MAC layer.
- Utilized **NS-3** to analyze the Enhanced Distributed Channel Access (EDCA) mechanism in 802.11ac, focusing on throughput and latency.
- Refined EDCA parameters to improve overall **QoS** performance in Channel Allocation for WiFi networks.

Shenzhen Research Institute of Big Data   Mar.2023 – Present
Research Assistant   Supervisor: Guangxu Zhu

DIIS Laboratory Internal Project
- Extracted **Channel State Information (CSI)** from Wi-Fi signals using Intel 5300 and RT-AC86U.
- Established a data collection platform for fall and intrusion detection.
- Employed three Intel 5300 for sub-2-second latency in real-time human **tracking and localization**.
- (Ongoing) Enhancing algorithm accuracy by jointly using Angle of Arrival (AOA) and Doppler Frequency Shift/Time of Flight (DFS/TOF).

Project with **China Mobile**
- (Ongoing) Utilizing Sionna for simulating coverage maps.
- (Ongoing) Optimizing UAV coverage based on real-world data.

⚙ Skills

- Programming Languages: Python > MATLAB > C++ > Labview = Java
- Platform: Linux
- Tools: Sionna, NS-3, CARLA, ROS

♡ Honors and Awards

3rd *Prize*, the First Wi-Fi Sensing Contest   Dec. 2023
Advanced to the semifinals in International Algorithm Competition of Pazhou Lab   Nov 2015

ℹ Miscellaneous

- Website: http://fanyimeng0.github.io
- GitHub: https://github.com/fanyimeng0
- Languages: English - TOFEL 92, Mandarin - Native speaker