Yuanzheng Tan

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Education

Tsinghua University, Shenzhen International Graduate School   *Eng.D, of Electronic and Information*   Sep.2023-July.2028
- GPA:3.86 /4.0   **Shenzhen**

Sun Yat-sen University, School of Intelligent Systems Engineering   *Bachelor of Engineering*   Sep.2019-July.2023
- GPA:4.1/5.0, **Honors**: The Outstanding Graduation thesis (Top 5%).   **Shenzhen**
- **Scholarship:** National Scholarship (Three times)/ School First-Class Scholarship (Three times)/ Baosteel Scholarship (Top 1 in Institute)/ Xuerou Li Scholarship (Top 1 in Institute).

Academic Research

Air-CAD: Edge-Assisted Multi-Drone Network for Real-time Crowd Anomaly Detection   Feb.2023-Aug.2023
- Designed an edge-assisted multi-drone network for accurate and real-time Crowd Anomaly Detection (CAD).   **Shenzhen**
- Proposed a zoom detector to achieve fast and accurate person detection on real drones, which could adjust the depth of model inference and focus the key channel of the feature map based on drones' shooting distances.
- Designed a feature scheduler for multi-feature analysis anomaly detection, which can allocate the most suitable tasks and edge devices for the drones based on drones' shooting parameters and edges' computing/network resources.
- **Achievement**：**1 Paper** (Published on **The Web Conf 2024, CCF-A)**

SkyNet: Multi-Drone Cooperation for Real-Time Identification and Localization   Oct.2021-March.2022
- Designed a multi-drone cooperative framework to achieve accurate and real-time identification and localization.   **Shenzhen**
- Proposed an algorithm for accurately locating person in 3D real world using only conventional 2D cameras and aligning face sub-images of one person from different drone views.
- Designed a novel fusion identification pipeline, which takes advantage of images from different FoVs by fusing them according to weights that reflect legibility.
- Reduced the latency of task processing to achieve the real-time execution through the cooperation of heterogeneous devices and dynamic task scheduling.
- **Achievement**：**1 Paper** (Published on **INFOCOM 2023, CCF-A)**

Energy Minimization for Wireless Powered Data Offloading in IRS-assisted MEC   Oct.2020-Nov.2021
- Proposed an energy minimization problem for an IRS-assisted and wireless powered multi-user MEC system.   **Shenzhen**
- Decomposed the energy minimization problem into the downlink energy transfer and the uplink offloading phases.
- Considered a time-slotted offloading protocol to avoid users' interference in the uplink phase and maximize each user's channel gain by optimizing the passive beamforming strategy.
- Designed an alternating optimization (AO) method to optimize the users' offloading decisions and the joint beamforming strategy in an iterative manner in the downlink phase.
- **Achievement**：**1 Paper** (Published on **IWCMC 2022)**

Extra-curricular Activites

Student Union of School of Intelligent Systems Engineering in SYSU   *Chairman*   Sep.2020- Sep.2022
- Assisted in organizing The 2021 Freshman orientation.   **Shenzhen**
- Managed the finances of the Student Union.
- Organized daily activities related to the Party and Group.

Skills & Interests

Language: Native in Mandarin, Fluent in written and spoken English: Passed CET-4 & CET-6.
Computer: Proficient in Word, Excel, PowerPoint, Python, C++, Matlab, Pytorch, UE, Maya.
Interests: Guitar, Singing, Dancing, Computer game.