Yidong Jiang

Email: yyydddd@mail.ustc.edu.cn | Mobile: +86 18210982182
Address: No. 96, JinZhai Road Baohe District, Hefei. Anhui. 230026 P.R. China

Education

University of Science and Technology of China (USTC) Sep. 2022 - Jul. 2026
Bachelor of Science in Data Science

GPA: 80.45/100

Core Courses: Computer programming (90/100); Electromagnetism (90/100); Complex Analysis (85/100); Mathematical Analysis (80/100); Summer Internship (90/100)

Research Experience

Multi - Drones Tracking Sept. 2024 - Present

Advisor: Prof. Yanyong Zhang (Computer Science, USTC)

- Current project involves creating a 3D-UKF structure and using IMM-UKF to track drones.
- My task is to assist in completing the theoretical derivation and coding for uniform circular motion (CT) and constant acceleration motion.
- The project is ongoing, and it is highly likely that a paper will be published

Sleep Safety and Health Monitoring Jun. 2024 - Present

Advisor: Prof. Rong Zheng (Computing and Software, McMaster University)

- Some wearable devices can monitor sleep quality. We aim to replace wearable devices with radar and machine learning methods for sleep quality monitoring. This involves using radar to measure key data from the human body, building a model that takes radar data as input, and outputting sleep stages to reflect the user's sleep status.
- Contribute to process heart rate, respiration, and acceleration data, extract features as inputs for a decision tree, and design a rule-based decision tree capable of distinguishing sleep stages.
- The project is ongoing, and it is highly likely that a paper will be published

Nash Equilibrium Guandan May 2024 - Sept. 2024

Advisor: Prof. Kani Chen (Financial Mathematics, HKUST)

- Worked under Professor Ka-Ni Chan at the Hong Kong University of Science and Technology to develop an AI agent for the card game “Guandan.” Our goal was to create a platform that combined Guandan teaching with gameplay.
- Used the DMC (Deep Monte Carlo) model for a foundation, and worked to incorporate additional rules in hopes that the AI agent would surpass human-level gameplay. However, the final model achieved a win rate of only 70%.
- Experimented with using MCTS (Monte Carlo Tree Search) to find the optimal strategy for the Jianzi game, but the method proved to be limited due to the large variety of card types and the high-dimensional action space.

Understand and Learn Fundamentals and Cutting-edge Advancements in RL Oct. 2023 - Apr. 2024

Advisor: Prof. Jie Wang (Department of Electronic Engineering and Information Science, USTC)

- Studied basic reinforcement learning algorithms for discrete states, including Q-learning and Monte Carlo methods, as well as continuous deep reinforcement learning networks like DQN. I am proficient in using Python and PyTorch to build neural networks.
- Used classic reinforcement learning methods such as Q-learning and policy-gradient to run some mini-games on Gym, such as CartPole and MountainCar.

Awards

Best Improvement Scholarship May 2023
Outstanding Freshman Scholarship Oct. 2022

Computer Skills

C; C++; Python (PyTorch); Compiler; Latex