Yu Zhao

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Education

University of Science and Technology of China *Anhui, China*

Master of Computer Science and Technology *Sep. 2021 - Jun. 2024*

- **GPA:** 3.81(Ranking Top 10%, 11/116)
- **Relevant Courses:** Combinatorial Mathematics(95), Applied Mathematics for Computer Science(93), Advanced Computer Netwroks(95), Edge and Cloud Computing(91)

Chongqing University *Chongqing, China*

Bachelor of Finance *Sep. 2017 - Jun. 2021*

- **GPA:** 3.59(Ranking Top 20%)
- **Relevant Courses:** Advanced Mathematics(90), Linear Algebra(91), Probability Theory and Mathematical Statistics(92), Java & Mobile App Development(91), Database Principles & Applications(92)

Work Experience

Eastern Institute For Advanced Study *Ningbo, China*

Research Assistant (Humanoid Robots) *Jul. 2024 - Current*

- I am concerned about humanoid robots locomotion over a variety of terrains. The current work attempts to use generative models to learn human actions and build hierarchical world models through meta-learning to enable robots to quickly adapt to different terrains.
- I hope to complete a paper to submit to a prestigious AI conference.

Publications

Conference Proceedings

PSFL: Parallel-Sequential Federated Learning with Convergence Guarantees **(under review)**
Jinrui Zhou, **Yu Zhao**, Mingjun Xiao, Sheng Zhang, jie Wu, Yin Xu
Submitted to IEEE International Conference on Computer Communications (INFOCOM), 2025

ERS: Faster LiDAR Point Cloud Registration for Connected Vehicles
Yu Zhao, Jinrui Zhou, Mingjun Xiao, Jie Wu, Sun He
International Conference on Distributed Computing Systems(ICDCS), 2024

To achieve faster point cloud registration, we proposed partitioning overlapping point clouds for registration in advance. For higher accuracy, we incorporated more geometric features during the registration. The Echo Registration System (ERS) increase the speed of existing point cloud registration methods.

Video Streaming Caching and Transcoding for Heterogeneous Mobile Users
Jinbo Cai, Mingjun Xiao, Junjie Shao, He Sun, **Yu Zhao**, Tongxiao Zhang
IEEE Conference on Parallel and Distributed Systems (ICPADS), 2023

We investigated how to cache and transcode video chunks for mobile users to maximize their Quality of Experience(QoE), while taking into consideration the cooperation between edge servers, users' mobility, and heterogeneous preferences.

Journal Articles

Cooperative Traffic Signal Online Control Using Game Theory and Contextual Bandit **(under review)**
Junjie Shao, **Yu Zhao**, He Sun, Jie Wu, Jinbo Cai, Mingjun Xiao
Submitted to IEEE Transaction on Services Computing(TSC)

We took the cooperation between intersections as well as fairness into consideration and propose a novel traffic signal online control algorithm, called FCTSC. By exploiting the contextual MAB model combined with game theory, FCTSC can achieve a fair and efficient solution quickly.

Edge-assisted Multi-vehicle Cooperative Perception: an Approach Based on Relative Pose Estimation **(Received Major Revision Decision)**
Yu Zhao, He Sun, Mingjun Xiao, Jie Wu, Junjie Shao, Jinbo Cai
Submitted to IEEE Transaction on Mobile Computing(TMC)

EVO adopts a suit of approaches to ensure the accuracy and real-time performance of cooperative perception: (1) a novel approach to estimate relative poses ; (2) a hierarchical registration module to speed up pose estimation; (3) a Regions of Interest (RoIs) prediction module and a registrations reduction module to reduce the computation latency.

Competition Experience

Huawei Code Craft Contest 2023: Second Prize *Shanghai, China*

Group Leader *2023*

- The contest required a program to allocate robots' tasks in real-time with limited computing resources, while the robots' movements are also managed.

CCF Computational Economics Competition 2023: Ranked Fifth *China*

Track Two *2023*

- This competition involves training agents to determine the behaviour of individuals to increase rewards, while government's decisions need to be taken into account.

Huawei Code Craft Contest 2024: Second Prize *Shanghai, China*

Group Leader *2024*

- This competition requires solving the navigation problem of multiple robots in real time.

Skills

Programming Python, C/C++, JAVA

Frameworks Pytorch, Open3D, ORBSLAM, LOAM, Carla

Languages Chinese, English(IELTS:6.5), GRE(319+3.5)

Sensors RGB Camera, Stereo Camera(ZED2), LiDAR, IMU

Honors & Awards

Mar.2024 , Outstanding Graduates in USTC *Hefei, China*

Oct.2023 , Postgraduate Academic Scholarship in USTC: First Prize *Hefei, China*

Oct.2022 , Postgraduate Academic Scholarship in USTC: First Prize *Hefei, China*

Oct.2021 , Postgraduate Academic Scholarship in USTC: Second Prize *Hefei, China*

2018,2019 , Comprehensive Scholarship in CQU, Twice *Chongqing, China*

2017 , Outstanding Students in Shandong Province *ShanDong, China*