Jianrong Ding

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GitHub Profile

Education

•Shanghai Jiao Tong University *Sept.2021 - June.2025(Expected)*

Bachelor of Engineering in Artificial Intelligence GPA: 3.94/4.3

Academic Interest

•Artificial Intelligence, Data Mining

Publications

•Rong Ding, Haiming Jin, **Jianrong Ding**, Xiaocheng Wang, Guiyun Fan, Fengyuan Zhu, Xiaohua Tian, Linghe Kong, "Push the Limit of Single-Chip mmWave Radar-Based Egomotion Estimation with Moving Objects in FoV", *the 21st ACM Conference on Embedded Networked Sensor Systems* **(SenSys 2023)**

•Kan Wu, **Jianrong Ding**, Jingli Lin, Guanjie Zheng, Qian Huang, Tu Xu, Yongdong Zhu, Baojing Gu, "Cost-effective mitigation of urban congestion with adaptive traffic signal control", PREPRINT available at Research Square [https://doi.org/10.21203/rs.3.rs-3176883/v1]

Personal Projects

•Cross-city Urban Traffic Prediction with Few-shot Learning *Apr.2023 - Jan.2024*

Research Assistant @CILAB, Advisor: Assoc. Prof. Guanjie Zheng, Shanghai Jiao Tong University

- Aim to use cross-city data for model training and produce better prediction on urban traffic data in the condition of few-shot learning.
- Proposed the utilization of frequency-domain data and employed a novel network structure to equip the model with more robust feature representations.
- Build models and conduct comparative experiments, validating that our approach outperformed the majority of collected baselines in the current setting.
- Summarized our outcomes into a research paper and submitted to a related conference.

•Egomotion Estimation with mmWave Radar and IMU *Sept.2022 - Mar.2023*

Research Assistant, Advisor: Assoc. Prof. Haiming Jin, Shanghai Jiao Tong University

- Utilized millimeter wave radar and IMU data to achieve object's self-pose and trajectory recognition in the presence of moving objects in the environment.
- Mainly responsible for reproducing results of 3 related literature, and carried out the experiment on data that we collected.
- Summarized our outcomes into a research paper and accepted by **Sensys 2023**.

•Cost-effective Mitigation of Urban Congestion with Adaptive Traffic Signal Control *July.2022 - Dec.2022*

Research Intern @CILAB, Advisor: Assoc. Prof. Guanjie Zheng, Shanghai Jiao Tong University

- Study on the adaptive traffic signals to reduce urban congestion.
- Conducted the experiment and verified that the adaptive method could reduce trip time by a considerable amount during peak hours and off-peak hours, respectively.
- Mainly responsible for writing traffic simulation code based on the cbengine traffic simulation engine, as well as for scraping and analyzing real-time traffic data from major cities in China from Amadet map.
- Summarized our outcomes into a research paper and submitted as a preprint.

Technical Skills

Programming Languages: C/C++, Python
Other Professional Skills: Pytorch, LaTeX, Linux command line, etc.
Languages: English(TOEFL: 106/120, CET6: 601/710)

Awards and Scholarship

•ZhiYuan Scholarship, Shanghai Jiao Tong University *2023, 2022, 2021*

•C-Class Excellence Scholarship, Shanghai Jiao Tong University *2023, 2022*

•2nd Prize (Provincial), Contemporary Undergraduate Mathematical Contest in Modeling *2022*

Club Activities

•Violinist, SJTU RongChang Chinese and Western Orchestra *Feb.2023 - present*