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: 3.92/4.3

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 - present*
Research Assistant @CILAB, Advisor: Assis. 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.
 – Led a 3-person team to build models and conduct comparative experiments, validating that our approach outperformed the majority of collected baselines in the current setting.

•**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: Assis. 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*