Shuncheng Liu

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🎓 Education

University of Electronic Science and Technology of China (UESTC) *2019-Present*

Ph.D., Computer Science and Technology, Advised by Prof. Kai Zheng & Han Su, Expected 2022

- Awards: The 1st Prize Scholarship (*2021*), The 2nd Prize Scholarship (*2019*)

Chongqing University of Posts and Telecommunications (CQUPT) *2015-2019*

B.E., Software Engineering

- Awards: National Scholarship (*2018*), National Scholarship (*2017*)

🔖 Research Interests

- **Spatial-temporal Data Mining:** Trajectory Analysis, POI Detection, Trajectory Distance Measures
- **Autonomous Driving:** Trajectory Prediction, Intelligent Perception, Decision Optimization
- **AI for Database:** Cardinality Estimation, Latency Estimation, Join Order Selection

📖 Publications

- **Shuncheng Liu**, Zhi Xu, Huimin Ren, Tianfu He, Boyang Han, Jie Bao, Kai Zheng, Yu Zheng: Detecting Loaded Trajectories for Hazardous Chemicals Transportation. *ICDE 2022* (*CCF A*)
- **Shuncheng Liu**, Han Su, Yan Zhao, Kai Zeng, Kai Zheng: Lane Change Scheduling for Autonomous Vehicle: A Prediction-and-Search Framework. *KDD 2021* (*CCF A*)
- Jin Chen, Guanyu Ye, Yan Zhao, **Shuncheng Liu**, Liwei Deng, Xu Chen, Rui Zhou, Kai Zheng: Efficient Join Order Selection Learning with Graph-based Representation. *KDD 2022* (*CCF A*)
- Han Su, **Shuncheng Liu**, Bolong Zheng, Xiaofang Zhou, Kai Zheng: A Survey of Trajectory Distance Measures and Performance Evaluation. *VLDB Journal 2020* (*CCF A*)
- Zhi Xu, **Shuncheng Liu**, Ziniu Wu, Xu Chen, Kai Zeng, Kai Zheng, Han Su: PATROL: A Velocity Control Framework for Autonomous Vehicle via Spatial-Temporal Reinforcement Learning. *CIKM 2021* (*CCF B*)
- Xu Chen, **Shuncheng Liu**, Zhi Xu, Yupeng Diao, Shaozhi Wu, Kai Zheng, Han Su: SCSG Attention: A Self-centered Star Graph with Attention for Pedestrian Trajectory Prediction. *DASFAA 2021* (*CCF B*)
- **Shuncheng Liu**, Guanglin Cong, Bolong Zheng, Yan Zhao, Kai Zheng, Han Su: Intention-Based Destination Recommendation in Navigation Systems. *DASFAA 2020* (*CCF B*)
- Xu Chen, Ximu Zeng, **Shuncheng Liu**, Zhi Xu, Yuyang Xia, Ruyi Lai, Han Su: TSummary: A Traffic Summarization System Using Semantic Words. *DASFAA 2022 Workshops* (*CCF B*)

⚙ Professional Experience

JD Intelligent Cities Research · JD Technology

- Leaded and accomplished the project of *Detecting Loaded Trajectories for Hazardous Chemical Trucks*. The work has been accepted by *ICDE 2022*.

Alibaba Innovative Resarch, AIR · Alibaba DAMO Academy

- Leaded and accomplished the research of *Intelligent Lane-changing for Autonomous vehicle*. The research has been accepted by *KDD 2021*.
- Leaded and accomplished the research of *Intention-based Destination Recommendation*. The research has been accepted by *DASFAA 2020*.
- Participated and accomplished the research of*Intelligent speed control for Autonomous vehicle*. The research has been accepted by *CIKM 2021*.
- Participated and accomplished the research of *Pedestrian Trajectory Prediction in High-density Traffic*. The research has been accepted by *DASFAA 2021*.
- Participated and accomplished the research of *RL-based DBMS Query Optimizer*. The research has been submitted to *ICDE 2023*.

Huawei Cloud Database Innovation Lab · Huawei Cloud

- Leaded and accomplished the research of *DL-based cardinality and latency estimation*. The research has been submitted to *CIKM 2022*.
- Participated and accomplished the research of *RL-based Join order selection*. The research has been accepted by *KDD 2022*.