Yanjie ZHANG

Personal Website | yj2yx@outlook.com | yanjie99

Summary

Research Interest

High Definition Map, Autonomous Driving, Smart City, Human Mobility

Highlight

Cross-disciplinary background: Transportation Engineering & Geographic Informatics

Relevant Courses

Advanced Mathematics, Linear Algebra, Intelligent Transportation System, Travel Behavior Analysis, Transportation Planning and Design, C Language programming, Data Mining

Education

2021 - 2024 Master's Degree at **Tongji University**
2017 - 2021 Bachelor's Degree at **Nanjing Agriculture University**

Projects

HD maps dynamic and long-term updating methods and interaction mechanism

The National Key R&D Program of China leading by **Prof. Wei Huang** *(Nov 2021 - May 2024)*
Based on the **High Definition (HD) map** model proposed in this project, my research focuses on studying the primary components of **dynamic information** within HD maps and their exchange formats. I aim to propose an information interaction approach that is applicable to the interaction between connected vehicles and HD maps.

Solving vehicle routing problems based on deep reinforcement learning

Undergraduate Thesis Research Plan advised by **Assoc. Prof. Yang Liu** *(Sep 2020 - May 2021)*
Utilizing an existing trained **deep learning** model, we aim to address the **route planning problem** by determining optimal delivery paths for vehicles with capacity constraints. Our goal is to find an approximate optimal solution that minimizes the total route distance.

Publications

Zhang, Y.J., Huang, W., Liu, X.T., Zhang, F.Y., Wu, H.B., Ying, S., Liu, C. (2024). An Approach for High Definition (HD) Maps Information Interaction for Autonomous Driving. *Geomatics and Information Science of Wuhan University*. 49(4): 662-671.

Liu, C., Huang, W., **Zhang, Y.J.**, et al. (2024). Dynamic Data Interaction Patterns and Contents of High Definition Maps for Autonomous Driving. *Chinese Society for Geodesy Photogrammetry and Cartography*.

Conference Proceedings

Zhang, Y.J., Huang, W. (2023). An Approach of High Definition Map Information Interaction. *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLVIII-1/W2-2023, 861–866.

Conference Presentations

An Approach of High Definition Map Information Interaction. The ISPRS Geospatial Week 2023, Sep 2-7, 2023, Cairo, Egypt

Services

Teaching Assistant	Advanced Research and Practice Course, Fall 2023.
Teaching Assistant	Guohao College "Introduction to Major (Engineering)", Fall 2024.

Skills

Programming	Python, C, SQL, Matlab
Frameworks	QGIS, Pytorch, Git, Anaconda, RoadRunner
English	GRE 320 (May, 2024), IELTS 7 (Oct, 2024)

Hobbies

Jogging, Ping Pong & Reading