Mr. Liu

Southwest Jiaotong University

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Education

2020.9-now	Southwest Jiaotong University	Traffic Engineering

Bachelor of engineering in Transportation, expect in 2024

- **Major Course**：Advanced Mathematics I:97；Advanced Mathematics II:96；Linear Calculus B:99；Probability and Statistics:93；College Physics BI:95；College Physics BII：96；Automatic Control Theory：96；Operational Research：92；C Language：99；Data Structure：89；Principle & Application of Database：93；Traffic data analysis：86；Transportation GIS：95
- Passed CET-6
- **Major GPA：88.52**   **Ranking within about top 10%**

Honors and Awards

- 2021.12   The First Prize Scholarship   <3%
- 2021.11   Merit Student   <8%
- 2022.12   The Third Prize Scholarship   <10%
- 2022.11   Ming Cheng Award   School Honors
- 2023.05   NACTranS   Third Prize
- 2023.06   Sichuan Computer Design Competition   First Prize
- 2022.12   Engineering Training Comprehensive Ability Competition   First Prize
- 2022.11   Sichuan College Students Logistics Design Competition   First Prize
- 2022.09   China Undergraduate Mathematical Contest in Modeling   Second Prize
- 2022.10   Logistics Design Competition in SWJTU   Second Prize
- 2022.05   Mathematical Modeling Competition in SWJTU   Third Prize

Research Experience

2022.4-2023-4	TECP of Chengdu based on multi-source data fusion	SRTP (Finished)

Guide：Professor Han Ke

- Multi-source spatiotemporal big data is used to build a set of road network perception model for traffic situation and vehicle pollution, and the final visual display provides governance decision support. Combined with flow (bayonet data), speed (floating vehicle data), road segment static information (OpenStreetMap) and other data, the emission factor model was used to calculate the emission of mobile source pollution. The DTW algorithm combined with external monitoring stations was used to verify the accuracy of emission results. The robustness of the model was verified by reducing the number of bayonets and comparing the flow variation.

2022.9-2023-1	Science and Technology Practice	Optional Course (99/100)

Guide：Dai Zhuang

- Bus station planning, battery charging optimization problem
- Spatial and temporal characteristics analysis of taxi emission pollution based on GPS data

Skills

- Proficiency in python,
- Proficient use of Qgis,Arcgis and Vissim