

Wenjie Luo

Transport Planning and Traffic Engineering | Graduating Jan 2027

Singapore | +65 8084 8140 | e1576499@u.nus.edu
github.com/LUOaini1213 | luoini1213.github.io

PROFILE

Apply traffic simulation and GIS network analysis to congestion, accessibility and flood resilience. Combine measured inputs, scenario comparisons and clear technical reporting.

EDUCATION

- National University of Singapore | MSc Civil Engineering**Aug 2025 - Jan 2027
- Transport focus; research in transportation information and control.
- Chang'an University | BEng Transportation Engineering**Sep 2021 - Jun 2025
- GPA 3.16/5.0; approximately top 15% of the cohort.

PROJECTS

- CE5001 Dissertation | Flood-Resilient Transport**Jan - Apr 2026
- Built a SUMO workflow linking terrain, roads, travel demand and flooding, integrating 793 bus service-direction pairs and 5,201 stops.
 - In 200 runs with paired seeds, the rule policy cut mean resilience-loss area (RTA) by 62.2% versus no rerouting at Marina South (H=2.5 m, GPS-off).
- CE5203 | AYE Weaving-Bottleneck Study**Mar - Apr 2026
- Counted traffic with YOLOv11 and calibrated SUMO in a four-person team, using 43 peak and 60 off-peak minutes of video at four points.
 - The original 12-scenario course study reported ramp-metering reductions of 22.7% in peak network time loss and 7.7% in weaving delay.
- GIS | Bus-Stop Accessibility Analysis**Mar - May 2024
- Led a team using Python and the Amap API to collect Xi'an bus-stop coordinates; built ArcGIS OD cost matrices with a 25 km/h network assumption.
 - Combined AHP weighting and fuzzy evaluation to compare stop accessibility and propose route improvements; delivered matrices and an analysis report.

EXPERIENCE

- Far East Facade | Project Engineer, Engineering Department**Jun 2026 - Present
- Track testing and deliveries for 15 façade material types across 5 suppliers; maintain a status board to support installation schedules.
 - Inspect site progress and quality, follow up on deviations and prepare monthly reports; coordinate milestones in weekly contractor meetings.
- Expeditors | Supply Chain Assistant**Dec 2024 - Apr 2025
- Coordinated carriers, clients and customs brokers on shipping documents; improved existing Excel checks to reduce manual errors.

SKILLS

Transport: SUMO/TraCI, traffic counts and calibration, ArcGIS network analysis, OD cost matrices
Methods: Python, YOLOv11, scenario comparisons, AHP and fuzzy evaluation; AutoCAD, Excel