



Jingyi Mao

A Joint Ph.D. student with external funding

(Oversea Study Program of Guangzhou Elite Project, GEP)

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EDUCATION

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| <ul style="list-style-type: none">• South China University of Technology
<i>Ph.D. of Civil and hydraulic engineering (focus on transportation)</i>
Average score: 85.67/100 | Guangzhou, China
09/2024-present |
| <ul style="list-style-type: none">• People's Public Security University of China
<i>Master of Electronic Information</i>
Average score: 90/100 | Beijing, China
09/2021-06/2024 |
| <ul style="list-style-type: none">• People's Public Security University of China
<i>Bachelor of Traffic Management Engineering</i>
Average score: 87.8/100 | Beijing, China
09/2017-06/2021 |

RESEARCH INTEREST

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- **Intelligent Transportation, Traffic Vision, Image Process, LLM, Expressway**

PUBLICATION

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- [1] **J.Y. Mao**, J.H. Peng, T. Zhou, Z.H. Wang, T.C. Luo, R.J. Xu, P.Q. Lin*. Low-Light Adaptive Image Recognition for Expressway Congestion using Feature Refinement. *Transportation Research Board 105th Annual Meeting (2026 TRB Annual Meeting)*.
- [2] **J.Y. Mao**, J.H. Peng, T. Zhou, Z.H. Wang, T.C. Luo, P.Q. Lin*. ILCR: An Attention-Enhanced and Adaptive Image-based Approach for Low-Light Expressway Congestion Recognition. (Round1 under review). *IEEE Transactions on Intelligent Transportation Systems*.
- [3] J.H. Peng, **J.Y. Mao**, P.Q. Lin*, Q.T. Li. Urban Emergency Delivery Network Resilience Optimization: The Potential Role of Unmanned Aerial Vehicles. (with editor). *Sustainable Cities and Society*.
- [4] J.H. Peng, P.Q. Lin*, **J.Y. Mao**, Q.T. Li. Dynamic Resilience of UAV-Supported Urban Emergency Delivery Networks: Disruption and Reconstruction. *Transportation Research Board 104th Annual Meeting (2025 TRB Annual Meeting)*.
- [5] P.Q. Lin*, Q.T. Li, **J.Y. Mao**. RSW-YOLOv8: An Improved Model for In-vehicle Vision Multi-object Detection in Complex Traffic Scenes. *Supercomputing*, 2025. DOI: <https://doi.org/10.1007/s11227-025-07540-z>.
- [6] **J.Y. Mao**; Y.C. Zhou; Y.F. Wang; J.Y. Li; F.L. Bu*. Attention-enhanced Voice Portrait Model using Generative Adversarial Network. *Computers Materials and Continua*, 2024. DOI: 10.32604/cmc.2024.048703.
- [7] Y.C. Zhou; Z.W. Hou; **J.Y. Mao**; F.L. Bu*, *et.al.* Co-embedding of edges and nodes with deep graph convolutional neural networks. *Scientific Reports*, 2024, 13(1), 16966. DOI: <https://doi.org/10.1038/s41598-023-44224-1>.
- [8] Y.C. Zhou; H.T. Huo; Z.W. Hou; **J.Y. Mao**; F.L. Bu*. An End-to-End Hyperbolic Deep Graph Convolutional Neural Network. *Computer Modelling in Engineering & Sciences*, 2024. DOI: [10.32604/cmes.2023.044895](https://doi.org/10.32604/cmes.2023.044895).
- [9] **J.Y. Mao**; Y.C. Zhou; J.Y. Li; Z.Q. Liu; F.L. Bu*. Audio-Face Generating Using Squeeze-and-Excitation Enhanced Generative Adversarial Network. *2023 IEEE 5th International Conference on Power, Intelligent Computing and Systems (ICPICS)*, IEEE, pp. 966-970, 2023. DOI: [10.1109/ICPICS58376.2023.10235541](https://doi.org/10.1109/ICPICS58376.2023.10235541).

EXTRACURRICULAR EXPERIENCE

- Publicity Committee Member, South China University of Technology (10/2024–present)
- Director of the Publicity Department, People's Public Security University of China Party School Branch (09/2022-09/2023)
- **Research Assistant, National Key Research and Development Program (Classified) (2022)**
- Director of Organization Department, Youth League Committee (2019-2020)
- Violin Performer, Performance at Tsinghua University (2019)
- Violin Performer, International Policing Forum Cultural Show (2018)
- Volunteer, The 56th Student Track and Field Games of Capital Colleges and Universities (2018)

ADDITIONAL INFORMATION

Scholarship:

- Third-place award scholarship, People's Public Security University of China (05/2024)
- Third-place award scholarship, People's Public Security University of China (11/2023)
- Third-place award scholarship, People's Public Security University of China (04/2023)
- Second-place award scholarship, People's Public Security University of China (11/2022)
- **First-place award scholarship**, People's Public Security University of China (04/2022)
- Second-class and third-class scholarships for many times, People's Public Security University of China (2017-2021)

Awards:

- **National Second Place, The 1st Transportation Foundation Model Agent application Innovation Competition (12/2025)**
- **Provincial Third Place, The 1st Guangdong "AI+Transportation" Innovation Application Competition (09/2025)**
- **Third Place, The 10th China Graduate Contest on Smart-city Technology and Creative Design (12/2024)**
- First-place award, Chinese People's Public Security University Choir Competition (12/2021)
- **National Second Prize, The Chinese Mathematics Competitions (12/2020)**
- **Provincial First Prize, The Chinese Mathematics Competitions (12/2020)**
- Bronze Award, "Mini Program-based Convenient Transportation System Design and Marketing Planning, Internet+" College Students Innovation and Entrepreneurship Competition (2019)

Honors:

- Excellent Graduate Cadre Award, People's Public Security University of China (11/2023)
- **Excellent Graduate Student Award**, People's Public Security University of China (12/2022)
- Excellent League Member, People's Public Security University of China (2021-2022)
- Outstanding League Cadre, People's Public Security University of China (06/2020)
- Individual Award for Special Support, The 70th Anniversary of the People's Republic of China (10/2019)
- Outstanding Individual Award for Social Activities, People's Public Security University of China (2018)

Skills:

- Languages: English (2023 **IELTS 7 C1**, Listening 8, Reading 7, Writing 6, Speaking 6); Chinese (native)
- Programming: Python, PyTorch, Auto CAD, PTV-VISSIM, and PTV Vistro.

Interests:

Playing the violin (grade 10); folk dance (grade 7); playing the piano; calligraphy; table tennis; kickboxing