Xiaofei **Yu**

Machine Learning Intern · Undergraduate

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Education

BUAA (Beihang University)

Beijing, China

M.S. in Transportation Engine — *Sept. 2020 - present*

- **Major courses** Transportation big data,Data analysis and mining,Mathematical Statistics,Traffic data modeling and analysis
- **Honors** Professional scholarship

DMU(Dalian Maritime University)

Dalian, China

B.S. in nautical science — *Sept. 2016 - June. 2020*

- **Major courses** Data Structures and Algorithms,Linear algebra,Complex function and integral transformation
- **Honors** Outstanding Graduate in Dalian

Project

Research on Dynamic Judgment and Countermeasures of Public Traffic in Chongqing

Beijing, China

Student backbone, Alibaba Amap Project Cooperative Intern — *Apr. 2021 - Sept.2021*

- As the core of students, connecting with Gaode, sorting out static indicators, travel experience indicators, and commuting indicators. The three major indicator calculation documents and report outlines
- Based on Gaode and Chongqing Urban Transport Investment and Development Group, using pyhton and QGIS to process and visualize basic route data and massive commute positioning data.
- From the three aspects of public transportation infrastructure construction, resident travel and commuting analysis, the analysis is carried out according to the three levels of Chongqing's central city, inner ring area and five hot spots.
- Leading the analysis of commuting ideas in five hotspots, exploring the relationship between commuting demand and public transportation supply, and giving optimization suggestions, some of which have been implemented.

Visualization platform construction of bus line network

Beijing, China

Coding for two visualization platforms — *Mar. 2021 - Sept. 2021*

- Independently design and build the front-end interface of the bus visualization system, the technology stack javascript, html, CSS, and the framework Vue used.
- Call the Gaode api to visualize the designated bus route map and distinguish the original route map between the upstream and the downstream, draw the optimized route through the optimized POI coordinate points, and compare the routes and indicators before and after the optimization to show the effect of the optimized route.
- Design and build a traffic road network situation detection and analysis system to visually display road accidents in Beijing for a year, and display the ranking of accident impacts and detailed accident information.

"Huawei Cup" Graduate Mathematical Modeling Contest

Beijing, China

Modeling team leader — *Oct. 2021*

- The selected research question is the airline crew scheduling problem, and the combination and optimization of the airline staff scheduling to realize the efficient allocation of resources. A multi-objective optimization function is constructed by linear weighting method, a mixed integer programming model is constructed to accurately describe the problem, and a heuristic algorithm is designed to solve it.
- By constructing a heuristic algorithm framework, an innovative idea of "unmarshalling and marshalling" based on taboo rules is proposed, which is highly adaptable and popular.

Extracurricular Activity

Volunteer Service for National College Students' Innovation and Entrepreneurship Annual Meeting — *Dalian,China*

Core Member — *Nov. 2017*

- Guide to help the participating teams better familiarize themselves with the rules and venues of the game.
- Answer various questions of the participating team members and help them establish contact with the organizer.
- Accompany the participating teams throughout the process to increase their satisfaction with the event.

Volunteer service for graduate students — *Beijing,China*

Core Member — *Aug. 2021*

- Guide and remind students who are returning to school from the new COVID19 virus protection measures, pay attention to personal safety.
- Distribute necessary safety protection materials to students returning to school.

Paper

Evaluating and Predicting road network resilience using traffic speed and log data — *Beijing, China*

First author in this paper — *Sep. 2021*

- The 22nd COTA International Conference of Transportation Professionals

Assessing Road Network Resilience under Recurring and Nonrecurring Incidents Considering Congestion Evolution: A Data-driven Approach — *Beijing,China*

Important contributor to the paper — *Sep. 2021*

- IET ITS under review

Honors & Awards

Domestic

2020	**2nd Prize,** Beihang Postgraduate Scholarship	*Beijing, China*
2019	**National level,** Innovation and Entrepreneurship Project honor	*Dalian,China*
2018	**National Third Prize,** National College Student Mathematics Competition	*Dalian,China*
2018	**Province level,** National College Students Mathematical Contest in Modeling,Second Prize of Liaoning Province	*Dalian,China*
2018	**Province level,** National College Student Mathematics Competition, First Prize of Liaoning Province	*Dalian,China*

Skills

- Familiar with various algorithms of machine learning and mathematical derivation process, familiar with its related operations in data mining and analysis.
- Familiar with various algorithms of machine learning and mathematical derivation process, familiar with its related operations in data mining and analysis.
- Familiar with the basic principles and design of database and simple use of SQL language.

Self-assessment

I am a person full of eagerness for technology and ability. I hope to be able to continue to learn and grow in practice. I hope to show myself better on a broader stage and realize my own value; I am a person who has a strong desire for career and success. I hope to get to know more people who have the same ideas as me. I hope to find more challenging things to make my life more meaningful; I am a person who loves life and likes to read, I hope to create more value in my position, and I hope to get in touch with the wider world Come to broaden your horizons.