

Fan Jiaxin

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Education

Beijing Jiaotong University, China

MSc in Transportation Planning and Management

Percentage: 88/100

Sep 2021 – Present

Thesis (Tentative Title): *Emergency Decision-making Method of Urban Rail Transit based on Knowledge Graph*

Supervisor: Professor Guangyu Zhu

Nanjing Agricultural University, China

BSc in Transportation Engineering

GPA: 3.65/4.5

Sep 2017 - Jun 2021

Thesis: *Design And Optimization Of A Disc Brake*

Supervisor: Associate Professor Guozhu Zhao

Academic Experience

Research Assistant

Beijing Jiaotong University

Sep 2021 - Present

Beijing, CN

- Engaged in multiple research projects on Urban Rail Transit with a specific focus on Intelligent Transportation Systems (ITS)

Research Assistant

Nanjing Agricultural University

Mar 2019 - Jun 2020

Nanjing, CN

- Successfully designed and implemented a roof-greening automatic irrigation system with advanced features, including remote control functionality through the SMS platform
- Developed a robust drive control circuit and MCU program using Keil C, ensuring reliable operation of the system
- Optimized the performance of the STC89C51 single-chip machine through simulation using Proteus software, resulting in an efficient and reliable solution

Work Experience

Project Assistant Intern

China International Engineering Consulting Corporation (CIECC), Department of Social Services

Sep 2022 - Dec 2022

Beijing, CN

- Conducted policy reviews and analyses for the "Suiyang Project," ensuring adherence to pertinent regulations and optimizing project outcomes
- Provided essential project support by collecting information, performing data analysis, and assisting in report writing, contributing to the efficient project management

Research Interests

Intelligent Transportation Systems, Data Analysis and Visualization, Machine Learning, etc.

Publications

- (SCI) Zhu, Guangyu and **Fan, Jiaxin** and Huang, Xinglin and Nuo, Zhang and Wu, Bo and Wei, Yun. Knowledge Acquisition Method of Urban Rail Transit Safety Event Case Base for Intelligent Emergency Response. *IEEE Transactions on Automation Science and Engineering*, 2023. (In Review)
- (EI) Zhu, Guangyu and Yang, Rongzheng and **Fan, Jiaxin** and Wei, Yun and Wu, Wu and Wu, Qi. Information Fusion and Emergency Knowledge Graph Construction of Urban Rail Transit. *International Journal of Computational Science and Engineering*, 2023. (Paper accepted)
- (SCI) Zhu, Guangyu and Sun, Ranran and **Fan, Jiaxin** and Li, Furong and Hou, Yuhong and Yu, Hui and Liu, Peter Xiaoping. Coupling Effect and Chain Evolution of Urban Rail Transit Emergencies. *IEEE Transactions on Intelligent Transportation Systems*, 2023.pp.1-10. Available at: doi:10.1109/TITS.2023.3283100

Research Grant Projects

Knowledge Graph Construction, Reasoning, and Decision Making for Intelligent Emergency Response of Urban Rail Transit Apr 2022 - Present

National Natural Science Foundation of China (General Program): NSFC-62272036.

Research on Big Data Fusion Technology for Real Time Safety Assessment of High Speed Railway Track System Dec 2021 - Present

National Natural Science Foundation of China (Key Program): NSFC-62132003.

Intellectual Property (IP)

Urban Rail Transit Emergency Plan Workflow Information Extraction Software Mar 2023

Registration number: 2023SR0321224 and Volume number: 2023-0066.

Relevant Skills

Programming Languages: Python (Tensorflow), C, MATLAB

Other Tools: Neo4j, AutoCAD, TransCAD, ArcGIS, SPSS, PTV-VISSIM, Cisco Packet Tracer, Adobe Photoshop, Adobe Premiere Pro, Adobe After Effect, VOSviewer, Protégé

Student Volunteer Experience

2018.09-2019.06: The leader of Press and Media Center, Career Development Association.

Work content: Operation of WeChat official account; Photoshoot of activities; Management of the department.

2017.09-2018.06: Member of New Media Center, Student Union, Youth League Committee of Agricultural Machinery Department

Work content: WeChat content publish; Video edit; Poster design; Photo shot.

Certifications

2019: Advanced AutoCAD-Vocational and Technical Training Certificate

2019: NCRE-4 (National Computer Rank Examination)

2018 & 2019: CET4(628), CET6 (549)

Awards/Scholarships

2022-2023: Outstanding League Cadre of the School of Traffic and Transportation of Beijing Jiaotong University

2022: First Prize of the Science and Technology Progress Award from the Beijing Rail Transit Association

2021 & 2022: First-class Scholarship for Postgraduate Studies (Scholarship ratio: around 30%)

2021: Outstanding Graduate of Nanjing Agricultural University

2017-2018 & 2019-2020: National Inspirational Scholarship (Scholarship ratio: around 3%)

2017-2018 & 2018-2019 & 2019-2020: Merit Student Scholarship

2017-2018 & 2018-2019: Single Subject Merit Scholarship

2019: Outstanding Leader Merit Student of the Career Development Association

2019: Third Prize of "Internet +" Innovation and Entrepreneurship Competition of Nanjing Agricultural University

2019: Outstanding League Member of Engineering College of Nanjing Agricultural University

2018: Outstanding League Cadre of Engineering College of Nanjing Agricultural University

2018: Third Prize of National English Contest for College Students