Feiyang Ren

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EDUCATION

University of Leeds **Leeds, West Yorkshire, UK**
PhD in Geography (Social) *10/2025-present*
Research Interest: Data-driven method for human behavior investigation in network approaches under the shared mobility context

New York University **Brooklyn, NY, U.S.**
MSc Applied Urban Science and Informatics *09/2023-05/2025*
Core Modules: Applied Data Science; Data Governance, Ethics and Privacy; Innovative City Governance; Spatial Analysis; Machine Learning for Cities; Transportation and Logistics

Xi'an Jiaotong Liverpool University **Suzhou, Jiangsu, China**
BSc Applied Mathematics *09/2019-07/2023*
Core Modules: Introduction to Programming in Java; Dynamic Modelling; Statistical Distribution Theory; Introduction to Operational Research; Analysis; Population Dynamics; Applied Probability; Optimization Theory

Publication

On the importance of both climate and vegetation evolution when predicting long-term wildfire susceptibility
F Ren, N Tobinsky, T Dorji, A Guibaud **International Journal of Wildland Fire**

- Preprocessed CMIP6, vegetation, topography and MODIS datasets via Python and R to conduct long term wildfire susceptibility prediction in Portugal under Maxent and Graph Convolutional Networks models under different shared socioeconomic scenarios
- Fine-tuned both Maxent and GCN models, compared the spatial patterns with current susceptibility and calculated gradient of variables contributing to the probability

Abstain Mask Retain Core: Time Series Prediction by Adaptive Masking Loss with Representation Consistency
R Liang, S Xu, C Xie, J Chen, **F Ren**, S Yang, T Yabe **NeurIPS 2025 Conference**

- Dynamic masked loss, which adaptively identified highly discriminative temporal segments to guide gradient descent during model training
- Representation consistency constraint, which stabilized the mapping relationships among inputs, labels, and predictions

ACADEMIC EXPERIENCE

AI-Driven Urban Agent Lab **Brooklyn, NY, US.**
Student Researcher (Mentor: *Dr. Zhang, Zhaoxi; Dr. Mendel, Tamir; Prof. Yabe, Takahiro*) *05/2024 – 05/2025*

- Conducted literature review and defined research questions; refined and developed full stack codes; drafted research papers (in preparation for publication)
- Built AI chatbots for collecting perspectives for Natural Language Processing and Sentimental Analysis
- Designed surveys embedded with AI chatbots and collected data from over 50 participants
- Built an individual chatbot based on Large Language Model (LLM) to explore features affecting human's perceived safety across various bike lane types in New York City and identified greenery and car existence as two primary factors
- Upgrading the individual chatbot to a real-time multi-user and multi-agent group communication chatbot to explore the relationship of AI and social loneliness
- **Tool Used**: Python (Flask, WebSocket, Natural Language Toolkit); JavaScript; Html; Google Cloud Platform (Vertex AI, Cloud Datastore, App Engine, Speech-to-Text AI, Text-to-Speech AI)

CONFERENCE

2025 American Association of Geography Annual Meeting *03/2025*

- Organized session "Technology and Innovation for Human and Community Health in Urban Management"
- Presented "Identifying features of the built environment that influence perceptions of cycling safety in New York City" from results of individual part of AI-Driven Urban Agent

TEACHING EXPERIENCE

New York University **Brooklyn, NY, U.S.**

Course Assistant (Module: *Urban AI: Deep Learning and Generative AI*) *01/2025 – 05/2025*

- Support *Prof. Yabe, Takahiro* in preparing and delivering course materials, grading assignments, proctoring in-class exams and fulfilling other general duties related to the course

New York University **Brooklyn, NY, U.S.**

Course Assistant (Module: *Civic Analytics and Urban Intelligence*) *09/2024 – 12/2024*

- Supported *Prof. Manny, Patole* in preparing and delivered course materials, graded policy memos, proctored in-class exams, presented in the lecture, and fulfilled other general duties related to the course

HORNORS

CUSP Experiential Scholars *2023-2024*

CUSP Promising Researcher *2025*

COURSE PROJECTS

Applying Optimization Heuristics to Evaluate Service Improvement *09/2024-12/2024*

- Analyzed the impact of L train service improvements on total system travel time using BPR, MINLP, and optimization techniques, comparing benchmark and alternative designs for cost-effectiveness

PROFESSIONAL EXPERIENCE

Guolian Securities Co., Ltd. **Wuxi, Jiangsu, China**

Internet Finance Intern *01/2021-02/2021*

- Applied Tinysoft (an SQL-based software) for market data analysis using the "Bargain Hunting" algorithm for stock selection, achieving a success rate exceeding 50%.

ADDITIONAL ACTIVITIES

CUSP London Global Data Dive 2024 *02/2024*

- Led a team on exploring relationship between air quality and mode of transit choices by using time series involving Pearson Correlation, Dynamic Time Warping, and reporting to fellows in CUSP London, NYU CUSP and guest audiences

CUSP Summer School 2024

- Delivered urban-focused presentations on rainfall modeling and simulation, material flows across the economy, and urban thermal risks

SKILLS

Languages: Fluent in English (IELTS: 7.0); Native Speaker of Mandarin

Programming & Software: MATLAB; Python; JavaScript; R; Html; Esri ArcGIS Product Series; Google Cloud Platform; Google Earth Engine

HOBBIES

New York University Cycling Team *2023-2025*

- A major member and raced in 2024 & 2025 Eastern Collegiate Cycling Conference