Wanting Xiang

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https://xiang-wt.github.io/

EDUCATION

Xi'an Jiaotong University (C9), School of Mathematics and Statistics   Xi'an, China

- Master of Applied Statistics, GPA: 3.52/4, Average: 87.80   Sept. 2023 – June 2026

Zhengzhou University (211), School of Business   Zhengzhou, China

- Bachelor of Economic Statistics, GPA: 3.74/4, Average: 89.57   Sept. 2019 – June 2023

PUBLICATIONS

Development and Validation of an Interpretable Machine Learning Model for Predicting Tic Disorders and Severity in Children Based on Electroencephalogram Data

- Journal: *IEEE Transactions on Neural Systems and Rehabilitation Engineering* **(JCR Q1, IF = 5.2)**
- Coauthors: **Wanting Xiang (first author)**, Gang Zhu, Yichong Hou et al.
- Publication Date: June 2025
- DOI: 10.1109/TNSRE.2025.3579763

RESEARCH EXPERIENCE

Microstate Functional Connectivity Network Design for Predicting TD   Mar. 2025 – Present

- Propose fusion strategy that combines spatiotemporal variability and graph theory features from Electroencephalogram (EEG) microstate networks
- Design multi-branched GAT incorporating attention-based fusion to model
- Begin preparation of one paper

Two-Stage Progressive Diagnostic Design for Predicting TD   Feb. 2024 – June 2025

- Preprocessed EEG from TD and HC using automated pipelines with manual refinement
- Proposed individual-based feature-weighted integration method and SFSW strategy, enhancing prediction accuracy of TD diagnosis and severity using ML models
- Employed model interpretability to uncover potential neurophysiological biomarkers
- Published one paper in 2025 *IEEE TNSRE*

Automatic Localization Design for Pharyngeal Sampling Regions   Dec. 2022 – June 2023

- Proposed application of Mask R-CNN model to novel clinical scenario-automatic detection of pharyngeal regions for throat swab collection
- Optimised Mask R-CNN parameters for precise localisation of pharyngeal sampling regions (tonsils and uvula)
- Documented in undergraduate dissertation

RELATED EXPERIENCE

Conferences

- The 7th International Conference on Mathematical Biology   2024, Xi'an, China
- Frontier Forum on Mathematical Methods for Pediatric Brain Disorders   2023, Xi'an, China

Work

- NIO Inc. | Data Operations Intern   Feb. – May 2023
- Henan Public Opinion Research Center | Data Analysis Intern   July – Aug. 2021

HONORS & AWARDS

"Huawei Cup" Mathematical Contest in Modeling, National Third Prize   2023, 2024

"Challenge Cup" Academic Science and Technology Competition, National Second Prize   2022

Mathematical Contest in Modeling, M Winner   2022

SKILLS

Languages: Chinese (native), English (fluent)

Programming: Python, MATLAB, R, SPSS, SQL