

Zhenwei Zhang

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EDUCATION

Tsinghua University

*Ph.D student in **Information and Communication Engineering***

*B.E. in **Electronic Engineering** with a Dual Degree in **Economics***

Beijing, China

Aug 2020 – Jun 2025

Aug 2016 – Jun 2020

RESEARCH INTERESTS

My research focuses on **spatial-temporal data analysis**. In collaboration with industry leaders such as *Microsoft* and *Huawei*, I gain deeper insights into analyzing and extracting valuable information from time-series data. I aim to apply these insights to effectively address real-world problems in my future work.

PUBLICATIONS

Z. Zhang, L. Meng, and Y. Gu, “SageFormer: Series-Aware Graph-Enhanced Transformers for Multivariate Time Series Forecasting,” *IEEE Internet of Things Journal*, 2024. (*Impact Factor 10.6*)

Z. Zhang, R. Wang, and Y. Gu, “Unravel Anomalies: An End-to-end Seasonal-Trend Decomposition Approach for Time Series Anomaly Detection,” *IEEE ICASSP*, 2024. (*Oral, 6 out of 29*)

Z. Zhang, X. Wang, et al., “Unlocking the Potential of Deep Learning in Peak-Hour Series Forecasting,” *ACM CIKM*, 2023.

Z. Zhang, L. Yan, and Y. Gu, “ST2T: A Spatio-Temporal Transformer for Cellular Traffic Prediction in Digital Twin Systems,” *IEEE ICEICT*, 2023.

J.Zhang, X.Wen, **Z. Zhang**, et al., “ProbTS: Benchmarking Point and Distributional Forecasting across Diverse Prediction Horizons,” *NeurIPS*, 2024 (*Under Review*)

INTERNSHIP EXPERIENCE

Microsoft Research Asia

Machine Learning Forecasting Group

Beijing, China

April 2024 – Now

- Implemented and integrated recent time-series foundation models, such as TimesFM and MOIRAI, focusing on their unique methodological designs. <https://github.com/microsoft/ProbTS>
- Conducted systematic benchmarking of time-series models, evaluating their performance across diverse prediction horizons, and documented results to support the validation of the ProbTS framework.

Huawei Technologies Co. Ltd.

Laboratory 2012, University-Enterprise Cooperation

Beijing, China

Jul 2022 – Jun 2023

- Lead a team to explore spatial decomposition and representation of cellular traffic through deep learning techniques, focusing on mining spatio-temporal auxiliary variables to enhance forecasting.
- Achieved 10% improvement in MAE and MSE on real-world data from Shijiazhuang, Ningbo, and Shenzhen. The algorithms have been deployed on internal platforms with two patents filed.

LEADERSHIP AND TEAMWORK

2022 Beijing Winter Olympics

Volunteer, Technical Department, National Stadium.

Jan 2022 – Mar 2022

Student Union, Department of Electronics, Tsinghua University

Head of Publicity Department.

Sep 2018 – Aug 2019