

# ZIYU ZHOU (周子渔)

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## EDUCATION

- Master of Philosophy in Data Science and Analytics, HKUST(GZ)** 2024.9 - Present  
Data Science and Analytics Thrust, Information Hub, HKUST(GZ) Guangzhou, China
- Present Cumulative GPA: 3.9/4.3.
  - Advisor: Prof. Yuxuan Liang.
- Bachelor in Computer Science, Beijing University of Technology** 2020.9 - 2024.7  
School of Computer Science, Beijing University of Technology Beijing, China
- Cumulative GPA: 3.55/4.0, 86.1/100.
  - Advisor: Prof. Gengyu Lyu and Prof. Yin Liang.
  - With honor: Bachelor in Computer Science with **Honours Degrees, Scholarship of the School of Computer Science, Outstanding Graduates (Top 5%)** and **Outstanding Graduate Thesis (Top 0.7%)** in Beijing.
- Minor in Finance, Beijing University of Technology** 2022.9 - 2024.6  
College of Economics and Management, Beijing University of Technology Beijing, China

## RESEARCH INTERESTS

My current research interests focus on advancing **data-driven deep learning** methods, with a particular emphasis on **spatiotemporal modeling** and **time series analysis** for **real world applications**. I strive to develop **robust, general purpose approaches** that effectively capture complex spatial and temporal dependencies across diverse domains, including traffic management, meteorological forecasting, and neuroscience. By harnessing these modeling techniques, my goal is to uncover new insights into how **dynamic processes** evolve and to produce **reliable forecasts** that guide decision making in high stakes environments. Beyond spatiotemporal data, I am also drawn to **multi modal learning, generative AI, and large language models**, exploring their **synergy** with time series analysis to unlock broader possibilities for **real world deployments**. Through this integrative perspective, I aim to create **versatile, scalable solutions** that push the boundaries of **predictive modeling** and deliver **tangible benefits** in areas ranging from urban planning to **neuroscience research**.

## CONFERENCE PROCEEDINGS AND JOURNAL ARTICLES

### **SDformer: Transformer with Spectral Filter and Dynamic Attention for Multivariate Time Series Long-term Forecasting**

Ziyu Zhou, Gengyu Lyu#, Yiming Huang, Zihao Wang, Ziyu Jia, Zhen Yang

*International Joint Conference on Artificial Intelligence (IJCAI), 2024* [Paper] [Code] ([Long Oral Presentation](#))

### **STFM: Enhancing Autism Spectrum Disorder Classification through Ensemble Learning-Based Fusion of Temporal and Spatial fMRI Patterns**

Ziyu Zhou\*, Yiming Huang\*, Yining Wang\*, Yin Liang#

*The Pacific Rim International Conference on Artificial Intelligence (PRICAI), 2023* [Paper] ([Oral Presentation](#))

### **Short-term Power Load Forecasting based on Similar Day Selection and Improved LSTM**

Ziyu Zhou, Hongyu Chen, Wenwu Wang

*IEEE 2nd International Conference on Electrical Engineering, Big Data and Algorithms (EEBDA), 2023* [Paper]

### **TimesNet-PM2.5: A Explainable and Powerful Version of TimesNet for Disentangling Intra-period and Inter-period Patterns in PM2.5 Prediction**

Yiming Huang\*, Ziyu Zhou\*, Zihao Wang\*, Xiaoying Zhi, Xiliang Liu#

*Atmosphere, 2023* [Paper]

### **Time-SSM: Simplifying and Unifying State Space Models for Time Series Forecasting**

Jiayi Hu, Disen Lan, Ziyu Zhou, Qingsong Wen, Yuxuan Liang#

*arXiv, 2024* [Paper]

\* Equal Contribution, # Corresponding Author

## MSV-PCT: Multi-Sparse-View Enhanced Transformer Framework for Salient Object Detection in Point Clouds

Zihao Wang, Yiming Huang, Gengyu Lyu, Yucheng Zhao, **Ziyu Zhou**, Bochen Xie, Zhen Yang, Yongjian Deng#  
*The AAAI Conference on Artificial Intelligence (AAAI), 2025 [Paper]*

## INTERNSHIP AND RESEARCH ASSISTANT EXPERIENCE

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**Software Intern at Beijing Founder Electronics Co., Ltd.** 2023.7 - 2023.9

- Gained hands-on experience with SVN, with basic concepts of version control in software development.
- Implemented PostgreSQL backup and restore functionalities, producing development documentation.

**Research Assistant in the DMS Lab at Beijing University of Technology** 2023.9 - 2024.6

- Completed Bachelor's graduate thesis, recognized as a **Outstanding Graduate Thesis** in Beijing.
- Successfully finished paper **SDformer**, accepted by IJCAI 2024 as the only long oral presentation.
- Maintaining a LaTeX undergraduate thesis template of Beijing University of Technology [Link].

## ACADEMIC SERVICES (REVIEWER & PC MEMBER)

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- International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2025
- International Joint Conference on Neural Networks (IJCNN) 2025
- Frontiers of Computer Science (FCS) 2024
- Neurocomputing 2024

## TECHNICAL SKILLS

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- **Programming Languages:** Python, SQL, C++, Matlab.
- **Software Tools:** Lingo, SPSS.
- **Modeling Skills:** Outstanding performance in national and international mathematical modeling competitions.
- **Language Proficiency:** IELTS 7.5 / 9 (8,8,6.5,6.5).
- **Document Preparation:** Proficient in LaTeX with extensive experience in academic paper writing.

## SELECTED AWARDS

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- **Honours Degrees** of Bachelor in Computer Science and Technology (Top 5%) 2024.6
- **Outstanding Graduate Thesis** in Beijing (Top 0.7%) 2024.6
- **Outstanding Graduate Thesis** in Beijing University of Technology (Top 6%) 2024.6
- **Outstanding Graduates** in Beijing (Top 5%) 2024.6
- **Outstanding Graduates** in Beijing University of Technology (Top 10%) 2024.6
- **Third Prize** in the 2022 National College Data Analysis Competition 2023.1
- **Junior Registered Data Analyst** of the Chinese Financial Analysis Association 2023.1
- **Excellence Award** in the 2023 First College Student Algorithm Contest 2023.4
- Project leader of the **Key Project** of the Beijing University of Technology's *Xinghuo Fund* 2022.6
- **Special Prize** in the American College Student Mathematical Modeling Contest 2023.2
- **Scholarship** from the School of Computer Science in Beijing University of Technology 2021.1