

# BOWEN ZHANG

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🌐 <https://01Zhangbw.github.io/>

## Education

**South China University of Technology**

**Sep 2021 – Jul 2025**

*Bachelor of Software Engineering, GPA:3.87/4.0 (90.65/100.0, Rank 4/49, Excellent Engineer Class)*

*Guangzhou, China*

## Relevant Coursework

- Mathematical Analysis
- Machine Learning
- Discrete Mathematics
- Data Mining
- Linear Algebra
- Deep Learning
- Data Structures
- Database System

## Selected Work

**Toward Physics-guided Time Series Embedding**

**arxiv, 2024**

*Jiaxi Hu, Bowen Zhang, Qingsong Wen, Fugee Tsung, Yuxuan Liang*

*ICLR2025, under review*

**Hierarchical Patch GNN for Irregular Multivariate Time Series Modeling**

**2024**

*Yicheng Luo, Bowen Zhang, Zhen Liu, Qianli Ma*

*ICLR2025, under review*

## Honors and Awards

- **National Scholarship** (Top 0.2% nation-wide) 2022
- **Top Ten Excellent Student Models of SCUT** (15k RMB, **Only 10** of all undergraduates at SCUT) 2023
- **Finalist of Mathematical Contest In Modeling** (MCM, Top 0.17% world-wide) 2023
- Top Ten Excellent Communist Party Members Nomination Award of SCUT (Top 0.02% at SCUT) 2024
- Shenzhen Haopeng Technology Diligence Scholarship (10k RMB, Rank 1/412) 2024
- First Prize Scholarship of South China University of Technology (Top 2% at SCUT) 2023
- First-class of Hongping Changqing Technology Innovation Scholarship of SCUT 2024
- First Prize of Chinese Mathematics Competitions (CMC, Top 7.8% provincial) 2022 and 2023 (twice)
- Gold Prize of National College Student Algorithm Design and Programming Challenge (Top 5% nationwide) 2023
- First Prize of Guangdong Province College Student Computer Innovation Competition (Rank 2/333) 2024
- Second Prize of MathorCup College Mathematical Modeling Challenge 2023

## Experience

**CityMind Lab (advised by Prof. Yuxuan Liang)**

**Jun 2024 – Present**

*Research Intern*

*Hong Kong University of Science and Technology (Guangzhou)*

- Researched on time-series analysis and spatio-temporal data mining, including expert models and foundation models.
- Worked on Physical Time-series Embedding. Finished most of experiments, including Linear, CNN, SSM, Transformer.

**Machine Learning and Data Mining Lab (advised by Prof. Qianli Ma)**

**Oct 2023 – Sep 2024**

*Research Intern*

*School of Computer Science, SCUT*

- Researched on data mining, including time series modeling and graph neural network.
- Researched on efficient AI, including Mixture-of-Experts. Explored the MoE and multi-scale modeling in time-series.
- Involved one work about irregular time-series (clinic data) and GNN. Paper (Hi-Patch) was submitted to ICLR2025.

**Key Laboratory of Big Data and Intelligent Robot (advised by Yi Cai)**

**Mar 2023 – Jun 2024**

*Research/Project Intern*

*School of Software Engineering, SCUT*

- Researched on natural language processing and LLM, engaged in practical research on models, ChatGLM, etc.
- Finished the project “WiseSight: AIGC-based Smart Glasses for Elderly Life Assistance”. This project won five prizes, including the First Prize and Best Innovation Prize of Guangdong College Student Computer Innovation Competition.
- Researched on LLM hallucination and RAG technology, developing the project “Natural Language Content Matching System Based on LLM”. Responsible for work on search engine augmentation.

## Projects

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### WiseSight: AIGC-based Smart Glasses for Elderly Life Assistance | *Python*

Oct 2023 – Jun 2024

- Aimed at elders and adopted a Client-Server architecture, using ChatGLM as LM base and fine-tuning.
- It performed Intelligent Interaction, Assisted Reading, Item Searching and Emergency Assistance function modules.
- Developed object recognition and scenario recognition for Item Searching, utilizing object detection models, like detec.
- Wrote innovative project documents, software development documents, and software testing documents.

### Beyond Guessing: Data-Driven Exploration of Word Features and Relationships | *Python, L<sup>A</sup>T<sub>E</sub>X*

Feb 2023

- Used ARIMA model to solve problems related to time-series analysis, determined ACF & PACF values and forecasted.
- Used the K-means clustering method to determine the difficulty level of the problem, TOPSIS entropy weight analysis.
- Utilized SPSS and Matlab for data preprocessing, analysis and visualization. Proficient in using L<sup>A</sup>T<sub>E</sub>X to write paper.
- This paper received Finalist (Top 0.17%) in Mathematical Contest In Modeling. [\[Paper Link\]](#)

## Leadership / Extracurricular

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### Monitor of class

Sep 2022 – Present

*Honored Excellent Student Cadre many times*

*South China University of Technology*

- Led class to receive **Top Ten Excellent Classes Nomination Award** of South China University of Technology(2023)
- Talented in Mathematical Analysis (Score: 98, Rank: 1/124). Received Excellent Auxiliary Volunteer.