

Zijian Huang

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Ann Arbor, Michigan - 48105, United States

EDUCATION

- **University of Michigan, Ann Arbor** Aug. 2024 - Present
B.S.E. in Industrial & Operation Engineering, Dual Degree Program Ann Arbor, United States
 - GPA: 4.00/4.00
- **Shanghai Jiao Tong University** Aug. 2022 - Present
B.Eng in Electrical and Computer Engineering Shanghai, China
 - Average Score: 91.15/100.00 (ranking: 3/238)
 - GPA: 3.84/4.00 (ranking: 6/238)

RESEARCH EXPERIENCE

- **Research on bayesian optimization** Apr. 2025 - Present
Advisor: Prof. Raed Al Kontar
 - Designing and analyzing Bayesian optimization methods for solving complex black-box optimization problems, including multi-objective settings, collaborative scenarios, and mixed-variable inputs.
- **Research on diffusion model** Oct. 2024 - May. 2025
Advisor: Prof. Qing Qu
 - Developing a theoretically grounded and practical metric, **Probability Flow Distance (PFD)**, to quantify and analyze the generalization behavior of diffusion models, revealing key phenomena such as memorization-to-generalization transition and bias-variance tradeoffs.

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, S=IN SUBMISSION, T=THESIS

- [S.1] **Understanding Generalization in Diffusion Models via Probability Flow Distance.**
Huijie Zhang, **Zijian Huang**, Siyi Chen, Jinfan Zhou, Zekai Zhang, Peng Wang, Qing Qu.
Submitted to *NeurIPS* 2025.

SKILLS

- **Programming Languages:** Python, Matlab, C++, Verilog, Spice
- **Data Science & Machine Learning:** Pytorch, Sklearn
- **Mathematical & Statistical Tools:** Mathematica, Matlab, Excel
- **Language:** Chinese (native), English (fluent), Japanese (basic), German (basic)

HONORS AND AWARDS

- **Accenture Industrial and Operations Engineering Scholarship** Mar. 2025
University of Michigan
- **Dean's List** Feb. 2025
University of Michigan
- **Undergraduate Excellent Scholarship** Nov. 2024
Shanghai Jiao Tong University
- **National Scholarship** Nov. 2024
Ministry of Education of the People's Republic of China
- **Undergraduate Excellent Scholarship** Nov. 2023
Shanghai Jiao Tong University
- **Yu liming Scholarship** Oct. 2023
SJTU Joint Institute
- **Annual Excellent Volunteer** Dec. 2022
SJTU Joint Institute

LEADERSHIP EXPERIENCE

- **Minister of Sport Department** Sept. 2023 - Aug. 2024
Student Union of SJTU Joint Institute
 - Responsible for organizing sports related activities within the college
 - Organized dozens of events, many with over 100 participants

TEACHING EXPERIENCE

- **Teaching Assistant, Vv286 (Ordinary Differential Equations)**

Aug. 2024 - Dec. 2024

SJTU Joint Institute

- Organizing recitation classes and office hour for Vv286 (Honors Mathematics IV Ordinary Differential Equations)

- **Teaching Assistant, Vv285 (Linear Algebra and Functions of Multiple Variables)**

May. 2024 - Aug. 2024

SJTU Joint Institute

- Organizing recitation classes and office hour, grading assignments and exams for Vv285 (Honors Mathematics III Linear Algebra and Functions of Multiple Variables)