

YANGXIN WU

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EDUCATION

Harbin Institute of Technology, Shenzhen

Bachelor's Degree, Computer Science and Technology

Shenzhen, China

09/2023 - Present

RESEARCH INTERESTS

- AI for science: machine learning algorithms, in particular generative modeling and connections to science.
- Reinforcement learning for LLM-based agents

RESEARCH EXPERIENCE

Neural PDE Solvers Implemented via Flow Matching

09/2025 - Present

Supervisor: Xiucheng Li, Assistant Professor

Harbin Institute of Technology, Shenzhen

- Ongoing.

Higher-Order Graph Neural Networks as Neural PDE Solver

03/2025 - 05/2025

Supervisor: Xiucheng Li, Assistant Professor

Harbin Institute of Technology, Shenzhen

- Proposed a higher-order graph neural network framework based on discrete and finite element exterior calculus for solving PDEs, achieving state-of-the-art performance on boundary value problems in electromagnetism.
- The paper "Boundary-Value PDEs Meet Higher-Order Differential Topology-aware GNNs" was published at NeurIPS 2025 (Spotlight Accepted).

International Conference on Spoken Language Translation, IWSLT 2025

01/2025 - 04/2025

Supervisor: Kehai Chen, Professor

Harbin Institute of Technology, Shenzhen

- By combining open-source large-scale language models and sequence-to-sequence automatic speech recognition models, a speech translation system for each language direction is trained.
- Winner of first place in the IWSLT 2025 Evaluation Campaign (Indic Track) for unconstrained end-to-end systems in three tracks (Bn-En, Hi-En, Ta-En). The System Description Paper was published in the proceedings of IWSLT 2025.

PROJECTS

Technical Standard Generation Based on Large Language Models

11/2023 - 11/2024

Supervisor: Kehai Chen, Professor

Harbin Institute of Technology, Shenzhen

- Successfully developed a web-based interactive system that enables users to input instructions through a front-end dialogue interface and interact with a large language model for standardized document generation.
- Key features of the system include multi-mode instruction functionality, keyword-based summary generation, full document synthesis, customized LLM integration, and a streamlined front-end interface.
- Final evaluation score: 98/100, ranked 2nd, awarded as "Outstanding First-Year Research Project." (University-Level)

SKILL STACK

- Programming Languages: C, Python, Java
- Tools: PyTorch, Git, LaTeX