Yang Wu

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Education

Huazhong University of Science and Technology GPA: 4.49/5.00
M.E., Computer Science 2022 - 2025

Wuhan University of Technology GPA: 4.08/5.00
B.E. (Graduate with Honors), Data Science and Big Data Technology 2018 - 2022

Research Interests

My research focuses on the intersection of **Software Engineering** and **Human-Computer Interaction**, including source ***code generation and summarization***, with a specific focus on the universality of ***natural language***, ***programming language***, and ***data visualizations*** with **AI tools**.

Publications

[1] Automated Data Visualization from Natural Language via Large Language Models: An Exploratory Study
Yang Wu, Yao Wan*, Hongyu Zhang, Yulei Sui, Wucai Wei, Wei Zhao, Guandong Xu, Hai Jin
SIGMOD 2024. *The ACM Special Interest Group on Management of Data.*

[2] Graph Neural Networks for Vulnerability Detection - A Counterfactual Explanation
Zhaoyang Chu, Yao Wan*, Qian Li, **Yang Wu**, Hongyu Zhang, Yulei Sui, Guandong Xu, Hai Jin
ISSTA 2024. *The ACM SIGSOFT International Symposium on Software Testing and Analysis.*

Projects

Exploring LLMs for NL2Vis April 2023 – Oct. 2023

- Conduct an empirical study to evaluate LLMs potential in generating data visualizations from NL.
- Investigate approaches to feed the structured tabular data into LLMs.
- Explore the effectiveness of in-context learning prompts for enhancing.
- Published at **SIGMOD 2024**, first author, advised by Prof. Yao Wan and Prof. Hai Jin at HUST.

Data Visualization Through Sign Language June 2024 – Sep. 2024

- Developed an accessible interactive data visualization tool with sign language support for Deaf and Hard of Hearing individuals.
- Submitted to **CHI 2025**, first author after advisor, advised by Prof. Yao Wan and Prof. Yi Wang.

Exploring LLMs as Evaluator for Code Summarization Sep. 2023 – Mar. 2024

- Explore LLMs for assessing code summarization without references.
- Prompt LLMs to adopt diverse roles in evaluating generated summaries across multiple dimensions.
- Submitted to **ICSE 2025**, first author, collaborated with the BDSC lab of Prof. Philip S. Yu at UIC.

A Counterfactual Explanation for GNN in Vulnerable Detection Jun. 2023 – Dec. 2023

- Motivated by "why my code is detected as vulnerable?"
- CFExplainer aims to identify a minimal perturbation to the code graph input that can flip the detection system's prediction from "vulnerable" to "non-vulnerable".
- Published at **ISSTA 2024**, co-author, collaborated with Prof. Yulei Sui at UNSW.

Technical Skills

Languages: C/C++, Java, Python(Pytorch, Tensorflow), SQL, Vega-Lite, Node.js
Tools: Git, Linux, LaTeX, Tree-sitter, and JavaParser
Teaching Assistant: *Compiler Principles and Techniques* at HUST
Honors: National Scholarship, Excellent Student Cadre, Outstanding Undergraduate