Zhaoyang Chu

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Education

Huazhong University of Science and Technology (Advised by Prof. Yao Wan) GPA: 3.53/4.0
M.E. in Computer Science and Technology *2022 – 2025*

Huazhong Agricultural University GPA: **3.93**/4.0
*B.E. in Data Science and Big Data Technology (**Graduated with Honors**)* *2018 – 2022*

Publications

[1] 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 (CORE A).

[2] How to Select Pre-Trained Code Models for Reuse? A Learning Perspective*.
*Zhangqian Bi, Yao Wan, **Zhaoyang Chu**, Yufei Hu, Junyi Zhang, Hongyu Zhang, Guandong Xu, Hai Jin.*
SANER 2025 (CORE A). ***IEEE TCSE Distinguished Paper Award**.

[3] TESTEVAL: Benchmarking Large Language Models for Test Case Generation.
*Wenhan Wang, Chenyuan Yang, Zhijie Wang, Yuheng Huang, **Zhaoyang Chu**, Da Song, Lingming Zhang, An Ran Chen, Lei Ma.*
NAACL 2025 Findings (CORE A).

[4] Hierarchical Graph Representation Learning for the Prediction of Drug-Target Binding Affinity.
***Zhaoyang Chu**, Feng Huang, Haitao Fu, Yuan Quan, Xionghui Zhou, Shichao Liu, Wen Zhang.*
Information Sciences (CORE A, Impact Factor 8.1), 2022.

Research Projects

*My research interest mainly focuses on the intersection of **artificial intelligence** and **software engineering**:*

Counterfactual Reasoning for GNN-based Vulnerability Detection
- Offer counterfactual explanations for uncovering the decision mechanisms of GNN-based detection systems.
- Accepted by **ISSTA 2024 (CORE A)**, First Author.

Learning-based Code LLM Selection for Reuse
- Guide developers to efficiently select pre-trained code LLMs suitable for target tasks within limited budgets.
- Accepted by **SANER 2025 (CORE A)**, Co-Author.

Benchmarking LLMs for Test Case Generation
- Evaluate LLMs' capabilities in generating test cases for given programs.
- Accepted by **NAACL 2025 Findings (CORE A)**, Co-Author.

LLM-as-a-Judge for Code Summarization
- Leverage LLMs to evaluate the quality of code summaries generated by neural models.
- Submitted to **IEEE Transactions on Software Engineering (CORE A*)**, Major Revision, Co-Author.

Machine Unlearning for Code LLMs
- Mitigating sensitive information leakage in Code LLMs through machine unlearning.
- Submitted to **ICSE 2026 (CORE A*)**, First Author.

Benchmarking LLMs for Synchronizing with Dynamic Code Evolution
- Assess LLMs' abilities to stay synchronized with real-time API updates from Python third-party libraries.
- Submitted to **ICML 2025 (CORE A*)**, Co-First Author.

Honors & Awards

National Scholarship for Postgraduates (Top 1%), **National Scholarship for Undergraduates (Top 1%)**