

## Education

- 2021–present **University of Michigan, Ann Arbor.**  
**Ph.D.** student in Computer Science and Engineering  
Advisor: Xinyu Wang
- 2021–2023 **University of Michigan, Ann Arbor.**  
**M.S.** in Computer Science and Engineering
- 2018–2021 **University of Michigan, Ann Arbor.**  
**B.S.** with High Honors in Mathematics and High Honors in Computer Science  
Thesis: Web Automation using Program Synthesis

## Research Interests

My research interest is in program synthesis and its applications. I investigate the principles of code generation. My goal is to design practical and user-friendly code-generation tools that benefit different domains.

## Publications

\* means equal contribution.

- 2024 **Efficient Bottom-Up Synthesis for Programs with Local Variables.**  
Xiang Li\*, Xiangyu Zhou\*, Rui Dong, Yihong Zhang, Xinyu Wang.  
*ACM SIGPLAN Symposium on Principles of Programming Languages (POPL), 2024*
- 2023 **DiLogics: Creating Web Automation Programs with Diverse Logics.**  
Kevin Pu, Jim Yang, Angel Yuan, Minyi Ma, Rui Dong, Xinyu Wang, Yan Chen, Tovi Grossman  
*ACM Symposium on User Interface Software and Technology (UIST), 2023*
- MIWA: Mixed-Initiative Web Automation for Better User Control and Confidence.**  
Weihao Chen, Xiaoyu Liu, Jiacheng Zhang, Ian long Lam, Zhicheng Huang, Rui Dong, Xinyu Wang, Tianyi Zhang  
*ACM Symposium on User Interface Software and Technology (UIST), 2023*
- SlabCity: Whole-Query Optimization using Program Synthesis.**  
Rui Dong\*, Jie Liu\*, Yuxuan Zhu, Cong Yan, Barzan Mozafari, Xinyu Wang.  
*In Proceedings of 49th International Conference on Very Large Databases (VLDB), 2023*
- 2022 **SemanticOn: Specifying Content-Based Semantic Conditions for Web Automation Programs .**  
Kevin Pu, Rainey Fu, Rui Dong, Xinyu Wang, Yan Chen, Tovi Grossman  
**Honorable Mention Award**  
*ACM Symposium on User Interface Software and Technology (UIST), 2022*
- WebRobot: Web Robotic Process Automation using Interactive Programming-by-Demonstration.**  
Rui Dong, Zhicheng Huang, Ian long Lam, Yan Chen, Xinyu Wang  
*Proceedings of the ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), 2022*

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## Services

- 2024 Member of the 25th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2024) Artifact Evaluation Committee  
Member of the 51st ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2024) Artifact Evaluation Committee
- 2023 Member of The First International Workshop on the Future of No-Code Digital Apprentices (AutoMates@IJCAI) Program Committee  
Member of the 44th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2023) Artifact Evaluation Committee  
Member of the 24th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2023) Artifact Evaluation Committee
- 2022 Student Volunteer of the 43th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2022)

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## Teaching Experience

- Winter 2023 Graduate Student Instructor of EECS 481: Software Engineering
- Fall 2022 Graduate Student Instructor of EECS 481: Software Engineering
- Winter 2021 Grader of Math 416: Theory of Algorithms
- Fall 2020 Grader of Math 555: Introduction to Complex Variables

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## Awards and Grants

- 2023 Rackham Conference Travel Grant
- 2022 AWS Cloud Credit for Research  
Rackham International Students Fellowship  
SIGPLAN PAC Professional Activities Grant  
The Programming Languages Mentoring Workshop (PLMW) scholarship for PLDI 2022
- 2021 The Programming Languages Mentoring Workshop (PLMW) scholarship for PLDI 2021

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## Talks and Presentations

- 2023/09 "SlabCity: Whole-Query Optimization using Program Synthesis", VLDB 2023, Vancouver, BC
- 2023/08 "SlabCity: Whole-Query Optimization using Program Synthesis", University of Rochester (virtual)
- 2022/06 "WebRobot: WebRobot: Web Robotic Process Automation using Interactive Programming-by-Demonstration", PLDI 2022, San Diego, CA
- 2022/05 "WebRobot: WebRobot: Web Robotic Process Automation using Interactive Programming-by-Demonstration", PLSE Reading Group, University of Michigan

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## Skills

- Languages Mandarin(native), English(proficient)