# Yifeng He

*Curriculum Vitae*

*Department of Computer Science*
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## Research Interests

My research interests lie in AI-driven software security and engineering, as well as in ensuring the security of AI models. I focus on developing novel AI-based techniques for testing software systems, libraries, and applications.

## Education

2023-present **Ph.D., Computer Science**, *University of California*, Davis.

2019-2023 **B.S., Computer Science, Applied Math**, *University of California*, Davis.

## Publications

### In Conference Proceedings

2026 Hongxiang Zhang, Yuyang Rong, **Yifeng He**, and Hao Chen. Llamafuzz: Large language model enhanced greybox fuzzing. In *ACM/IEEE International Conference on Automation of Software Test (AST)*, 2026.

2025 **Yifeng He**, Luning Yang, Christopher Gonzalo, and Hao Chen. Evaluating program semantics reasoning with type inference in system f. In *Neural Information Processing Systems (NeurIPS)*, 2025.

2025 **Yifeng He**, Jicheng Wang, Yuyang Rong, and Hao Chen. FuzzAug: Data augmentation by coverage-guided fuzzing for neural test generation. In *Findings of Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2025.

2025 **Yifeng He**, Ethan Wang, Yuyang Rong, Zifei Cheng, and Hao Chen. Security of ai agents. In *International Workshop on Responsible AI Engineering (RAIE)*, 2025.

2024 **Yifeng He**, Jiabo Huang, Yuyang Rong, Yiwen Guo, Ethan Wang, and Hao Chen. UniTSyn: A large-scale dataset capable of enhancing the prowess of large language models for program testing. In *International Symposium on Software Testing and Analysis (ISSTA)*, 2024.

2024 Jiabo Huang, Jianyu Zhao, Yuyang Rong, Yiwen Guo, **Yifeng He**, and Hao Chen. Code representation pre-training with complements from program executions. In *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2024.

2023 Jianyu Zhao, Yuyang Rong, Yiwen Guo, **Yifeng He**, and Hao Chen. Understanding programs by exploiting (fuzzing) test cases. In *Findings of the Association for Computational Linguistics (ACL)*, 2023.

2022 **Yifeng He**. Big data and deep learning techniques applied in intelligent recommender systems. In *2022 IEEE 4th International Conference on Civil Aviation Safety and Information Technology (ICCASIT)*, pages 1119–1124, 2022.

### Preprints

2024 Hongxiang Zhang, **Yifeng He**, and Hao Chen. Steerdiff: Steering towards safe text-to-image diffusion models, 2024.

2024 Jicheng Wang, **Yifeng He**, and Hao Chen. Repogenreflex: Enhancing repository-level code completion with verbal reinforcement and retrieval-augmented generation, 2024.

## Services

### Reviewer / Program Committee

2025,2026 International Conference on Learning Representations (ICLR)

2026 International Conference on Artificial Intelligence, Computer, Data Sciences and Applications (ACDSA)

2025 International Conference on Multimedia (MM)

2025 International Conference on Software Engineering Advances (ICSEA)

2025 Association for Computational Linguistics LLM Security Workshop (ACL-LLMSEC)

2025 Conference of the ACM Special Interest Group on Data Communication, Artifact Evaluation (SIGCOMM)

## Awards

2023 **Citation for Outstanding Performance**, Department of Mathematics, UC Davis

2019-2022 **Dean's Honor List**, College of Letters and Science, UC Davis

## Industry Experiences

04/2021-07/2021 **Software Development Engineer Intern**, *ByteDance (Toutiao)*, Creator Income Platform.

- Used microservice tech to connect parts of the author income settlement business
- Transformed author-relation data architecture design from relational database (SQL) to graph database (Gremlin) to allow better efficiency for the business model
- Refactored the income calculation control process within Python 3

07/2021-08/2021 **Software Development Engineer Intern**, *ByteDance (Xigua Video)*, Creator Experience Team.

- Created a data cleaner with ORM to maintain the size and readability of the online data settlement table
- Created the offline flow of Medium-Length Video Encouragement Project for weekly data calculation
- Built the interface for the frontend of the web and mobile app to display the data visualization