

Cheng Ding

Ph.D. Student

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Research Interests

Software Testing, Machine Learning, Database, Programming Languages

Education

2024–present **Ph.D.**, *University of Texas at Austin*

Advisor: Prof. Milos Gligoric

2020–2024 **B.Eng.**, *University of Science and Technology of China*

Publications

- [1] **TypeJinja: Static Type Checking of Jinja Templates at dbt Labs**
- Accepted by ICSE SEIP 2026. Page-to-appear.
 - A static type checker for Jinja language, integrated into dbt-fusion workflow.

Professional Experience

May 2025– **Software Engineer Intern**, *dbt Labs*, Remote from Austin, TX

Aug 2025 Worked on the static type checking system for **MiniJinja**, a Rust-based templating engine powering dbt.

- Designed a type system and checking framework for Jinja templates embedded in dbt pipelines.
- Integrated the type checking system into the dbt-fusion CLI to ensure early error detection.

Research Experience

2024–present **Graduate Research Assistant**, *University of Texas at Austin*, Austin, TX

Working on Software Testing and Database related topics.

2023–2024 **Research Assistant**, *University of Illinois at Urbana-Champaign*, Champaign, IL

Developed a runtime verification framework for the Go language, targeting cloud infrastructures like Kubernetes.

- Designed a practical tool supporting multiple specification languages (LTL, FSM, ERE).
- Implemented 5 optimized parametric monitoring algorithms enabling online verification with low overhead.
- Detected multiple bugs in widely-used open-source Go projects.

Honors and Awards

2024 Graduate School Fellowship, University of Texas at Austin

2022 Outstanding Student Fellowship, University of Science and Technology of China

Professional Service

CGO 2026 Artifact evaluation committee member, International Symposium on Code Generation and Optimization

Skills

Languages C, C++, Python, Java, Go, Rust, SQL, Bash, MiniJinja

Tools PyTorch, Pandas, Ray, MySQL, Kubernetes, Docker, Git, Linux, GDB, LLVM, Z3, NuSMV, Coq, AspectJ