

Cheng Ding

Ph.D. Student

✉ cheng.ding@utexas.edu

🌐 irisesd.github.io

🐙 [irisesd](#)

Research Interests

Software Testing and Verification, Machine Learning

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*

Experience

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

Exploring research directions now.

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

Building a runtime verification tool for Go language.

Detailed achievements:

- Aim to perform runtime verification of infrastructures of cloud systems like Kubernetes.
- Designing and implementing a practical Runtime Verification tool for Go which:
 - reports violations before it actually happens;
 - monitors multiple specifications simultaneously;
 - support multiple specification languages (LTL FSM, ERE, etc).
- Implemented 5 parametric monitoring algorithms:
 - achieve online monitoring which can report the violation promptly;
 - reduce runtime overhead using the enable sets optimization.
- Exploring more specifications based on common patterns of Go program bugs to verify widely-used Go libraries.
- Planning to submit a paper on GoMOP to a top Software Engineering conference.

Skills

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

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

Honors and Awards

2024 Graduate School Fellowship, University of Texas at Austin

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