

# Cheng Ding

*Ph.D. Student*

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## 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

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.
- Found several bugs in widely-used open-source Go projects.

## 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