Cheng Ding

Ph.D. Student

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⬡ irisesd

Research Interests

Software Testing and Verification, Machine Learning, Database

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
Working on Software Testing and Database related topics.

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, Pandas, 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