Zihe Song

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Education

The University of Texas at Dallas   *2020 - Present*
- ✧ *Ph. D. Computer Science*
- ✧ *Advisor: Wei Yang*
- ✧ *Interested areas: Software Testing, Reinforcement Learning*

The University of Texas at Dallas   *2018 - 2020*
- ✧ *M. S. Computer Science*

University of Electronic Science and Technology of China   *2014 - 2018*
- ✧ *B. E. Communication Engineering*

Publications

- ❖ **NICGSlowDown:**
  Evaluating the Efficiency Robustness of Neural Image Caption Generation Models,
  - S. Chen, **Z. Song**, M. Haque, C. Liu, W. Yang
  - *Accepted by 2022 Conference on Computer Vision and Pattern Recognition* **(CVPR'22)**
- ❖ **An Empirical Analysis of UI-based Flaky Tests**,
  - A. Romano, **Z. Song**, S. Grandhi, W. Yang, W. Wang
  - *Accepted by 43rd International Conference on Software Engineering* **(ICSE'21)**
- ❖ **An Automated Framework for Gaming Platform to Test Multiple Games**, **Z. Song**
  - *Accepted by 42nd International Conference on Software Engineering ACM Student Research Competition* **(ICSE'20 SRC)**

Internship

NetEase Fuxi Lab Summer Intern   *2020.05 - 2020.08*
- ✧ *Multi-style Imitation Learning Framework for Game Testing*

Current Projects

Availability Analysis of Existing Android Testing, Record and Replay Tools
- ✧ *Investigating the usability and effectiveness of existing record and replay tools in Android testing.*
- ✧ *Analyzing the reproducibility of different types of bugs in Android apps.*

Automated Flaky Test Fixing Framework for Web UI Testing
- ✧ *Designing an automated fixing framework to detect and fix UI flakiness in web e2e testing.*
- ✧ *Fixing flaky tests caused by asynchronization by recording and tracking DOM mutations.*

Data Consistency Level Testing and Validation in Multiple Databases
- ✧ *Designing algorithms to validate different data consistency levels (e.g., causal consistency).*
- ✧ *Setting up on multiple databases (e.g., Galera Cluster, TiDB, FaunaDB) for evaluation.*

Evaluating the Performance of Neural Machine Translation Systems
- ✧ *Designing new adversarial attack methodology for existing Neural Machine Translation Systems.*
- ✧ *Evaluating the efficiency-robustness of NMT systems under attack.*

Skills

Programming Languages: *Python, Java, C, SQL*