DAZHI FENG

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EDUCATION

Southern University of Science and Technology, Shenzhen, China
Undergraduate instructed by Prof. Yinqian Zhang. Junior GPA: 3.94/4.0

University of Notre Dame, Notre Dame, IN
Exchange Student GPA: 4.0/4.0

University of California, Irvine, Irvine, CA

Mar. 2023 – June 2023

RESEARCH PROJECT

Fuzzing Android APIs through Automatically Generated Unit Tests

Aug. 2023 - Present

Independent Research Project instructed by Prof. Xiaoyu Sun

Remote Internship, supervised by Prof. Joshua Garcia

Android is a widely used system, deployed on devices ranging from smartphones to IoT devices and automobiles, and the APIs it provides affects everyone. Still, there are few researches on the security of the APIs using fuzzing technique because of the number of them and the complexity to invoke them. In this research, we extend the tool JUnitTestGen, which automatically generates unit tests for individual APIs, to allow fuzzing on these APIs efficiently and accurately.

Few-Shot Learning IR Embedding Based Function Similarity

Feb. 2023 - Nov. 2023

Independent Research Project instructed by Prof. Yinqian Zhang

Matching similar codes is a fundamental task in software engineering with various applications, e.g. plagiarism detection and vulnerability analysis. However, most existing techniques perform only one-to-one matching and are dependent on specific languages. We propose a novel approach combining Intermediate Representation matrix embedding and Few-Shot Learning to perform one-to-many matching of similar functions in different languages. A paper on this project is submitted to SANER 2024 and is now under review.

Automatic Reproduction of AV System Bugs

Mar. 2023 – June 2023

Independent Research Project instructed by Prof. Joshua Garcia

Numerous bug reports are submitted to Autonomous Vehicle (AV) system developers, but manually reproducing these bugs is time-consuming. In this project, we use computer vision techniques to automatically reconstruct the bugsy scenes to help reproducing the bugs.

PUBLICATION

1. [SANER'24 Short Paper] Dazhi Feng, Yinshuai Li, Qingyang Zhou, Yinqian Zhang. "Few-Shot Learning IR Embedding Based Function Similarity". Status: Under Review

EXPERIENCE

CS305 Computer Network Teaching Assistant

Feb. 2023 – June 2023

instructed by Prof. Zhuozhao Li

President of the Student Union

Oct. 2021 - Oct. 2022

Elected president of the Student Union of Southern University of Science and Technology

GRADES AND SELECTED AWARDS

• TOEFL iBT: 111/120 (Top 5% globally)*	
Second-Class Merit Student Scholarship	Oct. 2023
• 3 rd Prize, Contemporary Undergraduate Mathematical Contest in Modeling	Dec. 2022
Third-Class Merit Student Scholarship	Dec. 2022
Best Test Mark, NUS School of Computing Summer Workshop	July, 2022
Third-Class Merit Student Scholarship	Dec. 2021

^{*}According to TOEFL iBT Test Score and Data Summary 2022

[‡]Last Updated: Dec. 20, 2023