

CHI XU

The Hong Kong University of Science and Engineering, Clear Water Bay, Kowloon, Hong Kong

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EDUCATION

Undergraduate

Southern University of Science and Technology

B.E. in Computer Science and Engineering

GPA: 3.87/4.00; Ranking: 5/181 (Top 5%)

Sept. 2019 - June. 2023

Shenzhen

Ph.D.

The Hong Kong University of Science and Technology

Computer Science and Engineering

Ph.D. student in Computer Science and Engineering

August. 2023 - Present

Hong Kong

English Proficiency

TOEFL: 97 GRE: 329 (159+170+3.5)

RESEARCH INTERESTS

Smart Healthcare, Human Computer Interaction, Machine Learning, Software Engineering

PUBLICATION

Huaxun Huang, **Chi Xu**, Ming Wen, Yepang Liu, Shing-Chi Cheung "ConfFix: Repairing Configuration Compatibility Issues in Android Apps" ISSTA 2023: Proceedings of the 32nd ACM SIGSOFT International Symposium on Software Testing and Analysis (CCF-A, top symposium on software testing and analysis), Pages 514–525

<https://doi.org/10.1145/3597926.3598074>

July 2023

ACADEMIC EXPERIENCES

Android Compatibility Issues Repair

Keywords: Compatibility, Automated Repair, Android

May. 2022 - Nov. 2022

- Goal: Conduct empirical study on repairs of Android Compatibility issues, and implement an automatic tool to repair such issues.
- My contributions: Do experiments to test and verify these issues and repairs, reproduce them in different scenarios. Process the data from log and output of our tool, improve the its performance and accuracy.
- Outcome: One paper "ConfFix: Repairing Configuration Compatibility Issues in Android Apps" has been accepted by ISSTA 2023.

Detecting WebAssembly VM Vulnerabilities via Fuzz Testing (leader)

Keywords: WebAssembly, AST, Fuzz, Virtual Machine, MCMC

Sept. 2021 - July. 2022

- Goal: Aim to find some vulnerabilities of Wasm via fuzz testing and research the solutions to fix them.
- My contributions: Propose the framework of our tool, including the algorithm. Check the feasibility of the implementation and do experiments to verify its performance.
- Outcome: [Patent] Chi Xu, Yitong Wang, Sina Wang, Yepang Liu. Analysis of WebAssembly runtime vulnerability detection based on fuzzy testing. CN Patent Application: 2022105489273. 2022. Under substantive examination.

COURSE PROJECTS

Video Content Distribution Networks (CDNs) |Python, Docker (leader)

Apr. 2022 - Jun. 2022

- Outcome: Implement a video distribution systems that uses adaptive bit rate selection and DNS redirect. Moreover, we integrate danmaku system and comment system into the our original design, and implement a HTTP proxy with adaptive bit rate selection at the same time.
- Assessment: Highest score project in curriculum of Computer Networks. Present this project in class.

Modified Pac Man | *Unity3D, C#, Photon, Python, MySQL, Probuilder* (**leader**) Sept. 2021 - Nov. 2021

- Outcome: Implemented an online game adapted from Pac Man, all services deployed on servers, supported upload of AI scripts, beautiful UI with Photoshop and Probuilder.
- Assessment: Highest score project in curriculum of Oriented Object Analysis and Design, aimed to be deployed as a platform for curriculum of AI.

Railway System | *PostgreSQL, HTML + CSS + Vue.js, SpringBoot, python* (**leader**) Nov. 2020 - Dec. 2020

- Outcome: Implemented a Railway System like 12306 in China, designed the relational table without redundancy, added index and view, displayed by a front-end with Vue.js concisely, kept security and prevented SQL injection by procedure, trigger and transaction and proved reliable under high concurrency.
- Assessment: Highest score project in curriculum of Database Principle.

TEACHING EXPERIENCES

Teaching Assistant of CS302: Operating System, SUSTech	Feb. 2023 - Jun. 2023
Teaching Assistant of CS304: Software Engineering, SUSTech	Feb. 2023 - Jun. 2023
Teaching Assistant of CS309: Oriented Object and Algorithm Analysis, SUSTech (TA of CS309 for international students)	Sep. 2022 - Jan. 2023
Teaching Assistant of CS209A: Computer System Design and Applications A, SUSTech	Sep. 2022 - Jan. 2023
Teaching Assistant of CS303: Artificial Intelligence, SUSTech	Sep. 2022 - Jan. 2023
Teaching Assistant of CS307: Principle of Database, SUSTech	Feb. 2022 - June. 2022
Teaching Assistant of CS202: Computer Organization, SUSTech	Feb. 2022 - June. 2022
Teaching Assistant of CS102A: Introduction to Java Programming, SUSTech	Feb. 2021 - Jun. 2021
- Assisted the instructor involved in preparing assignment and class discussion	
- Designed the course projects and provided demos for students	
- Answered and clarified the students' questions about the courses	

INTERNSHIPS

Research Assistant, HKUST, Supervised by Prof. Qian Zhang	Jun. 2022 - Sep. 2022
Software Intern, Carrier Network Business Group, Huawei	Jun. 2021 - Aug. 2021
- Participated in the research and development of the control system for 5G base stations	
- Designed and maintained the UI with the back-end consistency, and ensured the reliability of database	

EXTRACURRICULAR ACTIVITIES

Monitor of Department of Computer Science and Engineering	Oct. 2021 - Jun. 2023
Co-maintainer of the SUSTech Application (https://sustech-application.com)	Jun. 2020 - Jun. 2023
Campus Ambassador of CFF in SUSTech, SUSTech	Apr. 2022 - May. 2023
Leader of Student Union in Zhiren College of SUSTech	Oct. 2020 - Oct. 2021

HONORS & AWARDS

Outstanding Graduate of SUSTech	Jun. 2023
2023 Distinguished Undergraduate Thesis of SUSTech	Jun. 2023
National Scholarship (Top 8 in SUSTech)	Oct. 2022
Grand Prize of the School Motto Scholarship (Top 4 in SUSTech)	Oct. 2022
The First Class Scholarship of the University for three years in a row (5%)	Oct. 2020 - 2022
Outstanding Student Assistant in Department of Computer Science and Engineering	Jun. 2022
Honor of College Dean (Top 1 of ZhiRen College)	May. 2022
Excellent Student Representative of the University (1%)	May. 2022
Runner-up in the IEEE Software Testing Contest (1%)	May. 2022
Champion of the National College Employment Test Competition (0.003%)	Apr. 2022
Honorable Mention of Mathematical Contest in Modeling	Apr. 2022
The Second Prize of the National Software Testing Contest for College Students	Nov. 2021

The Second prize in Contemporary Undergraduate Mathematical Contest in Modeling
Excellent Student Representative of College
Outstanding Student Leaders

Sept. 2021
May. 2020
Apr. 2020

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, SQL, JavaScript, Verilog, HTML/CSS
Frameworks: Vue, SpringBoot, MyBatis, Hibernate, Node.js, JUnit
Developer Tools: GitHub, VS Code, PyCharm, IntelliJ, CLion, MATLAB