# Jiacheng, Li

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## Education

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| Sep 2020 - Present | **Southern University of Science and Technology (SUSTech)**<br>Bachelor of Computer Science<br>*GPA: 3.88/4.0 RANK: 9/220* | Shenzhen, China |
| Aug 2023 - Present | **National University of Singapore (NUS)**<br>Semester Exchange Student | Singapore |

## Research Experience

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| Jan 2023 – Jul 2023 | **Towards the Adoption and Adaptation of the AndroidX Library: An Empirical Research**<br>*Co-first Author, accepted by the 23rd IEEE International Conference on Software Quality, Reliability, and Security*<br>**Summary:** Our study focuses on the AndroidX library, a pivotal resource for ensuring backward compatibility, surpassing the Support Library. We delve into developers' prevalent issues and causes regards AndroidX, explore its adoption status across top used apps, and establish comprehensive class mappings bridging AndroidX and Support Library. Our research yields essential insights into the Android ecosystem, highlighted by:<br>• Identification of frequent developer-reported issues<br>• Creation of an extensive mapping between Support Library and AndroidX<br>• Investigation over 15000 Android Apks |
| Jan 2023 – Jul 2023 | **Towards a Better Understanding of the Official Android API Lists**<br>*Third Author, to be submitted to IEEE Transactions on Software Engineering*<br>**Summary:** Android apps rely on the Android framework, which provides a set of APIs that abstract the system's functionality. These APIs are documented in Android API Lists (AALs). A comprehensive study was conducted on four official AALs generated through different means. Our study revealed instability and inconsistency among the AALs, emphasizing the need for a rational approach when using official Android API lists. My work involves:<br>• Collection of a comprehensive APK dataset<br>• Application of the static analysis tool Soot to extract Android APIs employed within the APK set<br>• Develop of an Android App for real-device testing of API existence |
| Jul 2022 – Dec 2022 | **Face-changing malicious Android app Detection**<br>*First patent holder, CN Patent Application 2023108428914 filed July 2023, Patent Pending*<br>**Summary:** Our research targets face-changing apps that adopt malicious behaviors under specific circumstances, executing functions such as information theft and abusive advertising. To tackle this challenge, we've developed a novel method that employs static analysis through taint analysis, accompanied by an extensive dynamic analysis strategy. Key highlights of our work encompass:<br>• Concurrent utilization of static and dynamic analyses<br>• Introduction of the innovative runtime environment pool concept |

## Achievements

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| Oct 2021 Oct 2022 | **First Class Scholarship** *Southern University of Science and Technology* |

Jul 2022 — **Best Innovation award in the Global Engineer Talent Research and Innovation Summer School**
*Southern University of Science and Technology*
- Smoothing the electromyographic signals to control prosthetic limbs
- Combination of deep learning and traditional signal processing.

Jan 2022 — **Outstanding Volunteer in Summer Social Practice**
*Guangdong Provincial Department of Education*
- Led a team in a teaching volunteer program, benefiting 100+ children
- Orchestrated curriculum scheduling and managed volunteer coordination

## Other Experience

2023 Aug - Present — **Exchange student - NUS Overseas Colleges program**
- Participated entrepreneurship-focused courses, gaining insights into business strategy and market analysis
- Engaged in cross-cultural collaboration and hands-on projects

2023 Aug - Present — **Data analyst intern - Auristione (Singapore Start-up Company)**
- Enhanced data quality, contributing to robust model outcomes
- Built ML models using gene features for predicting cancer types

2022 Feb – 2023 Jun — **Teaching assistant - SUSTech Computer Science Department**
- Developed lesson plans and assignments for 50 students across Java Programming and Computer Organization courses
- Managed assignment deployment on an online platform, facilitating efficient evaluation processes

2021 Sep – 2022 Jun — **Senior tutor - SUSTech Administrative College**
- Guided and mentored a group of 30 freshman students
- Provided valuable support in their transition to university life, offering advice on daily routines and effective study strategies
- Orchestrated various college activities to enhance student engagement and community involvement

## Skills Proficiency

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| **Programming language** | Java, Python | Proficient |
| | C/C++, MATLAB, Bash | Intermediate |
| | Mips assembly | Basic |
| **Website development** | HTML, CSS, JavaScript | Intermediate |
| | SpringBoot, VUE | Intermediate |
| **Database** | MySQL, PostgreSQL | Intermediate |
| **OS** | Linux | Intermediate |
| **Others** | Git, Vim, Latex, Verilog | Intermediate |
| | Android, Soot | Basic |