Jaeseung Choi

Software Security Lab (SoftSec)
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RESEARCH INTERESTS

Software security, static analysis, software testing, binary analysis.

RESEARCH POSITION

Software Security Lab, KAIST *Mar 2017 -*
Ph.D Student in Computer Science
Advisor : Prof. Sang Kil Cha

EDUCATION

Programming Research Laboratory, Seoul National University *Mar 2015 - Feb 2017*
Master of Science in Computer Science & Engineering
Advisor : Prof. Kwangkeun Yi
Thesis : Improving the Efficiency of User Interaction Based Alarm Classification System by using Data Dependency and Control Flow Graph

Seoul National University *Mar 2011 - Feb 2015*
Bachelor of Science in Computer Science & Engineering
Major GPA : 4.02 / 4.30
Overall GPA : 3.91 / 4.30

PUBLICATIONS

1. **Jaeseung Choi**, Kangsu Kim, Daejin Lee, and Sang Kil Cha. "NTFUZZ: Enabling Type-Aware Kernel Fuzzing on Windows with Static Binary Analysis." In *Proceedings of the 42nd IEEE Symposium on Security and Privacy* (S&P), 2021

2. **Jaeseung Choi**, Joonun Jang, Choongwoo Han, and Sang Kil Cha. "Grey-box Concolic Testing on Binary Code." In *Proceedings of the 41st ACM/IEEE International Conference on Software Engineering* (ICSE), 2019

3. Minkyu Jung, Soomin Kim, HyungSeok Han, **Jaeseung Choi**, and Sang Kil Cha. "B2R2: Building an Efficient Front-End for Binary Analysis." In *Proceedings of the NDSS Workshop on Binary Analysis Research* (BAR), 2019

4. SeongIl Wi, **Jaeseung Choi**, and Sang Kil Cha. "Git-based CTF: A Simple and Effective Approach to Organizing In-Course Attack-and-Defense Security Competition." In *Proceedings of the USENIX Workshop on Advances in Security Education*, 2018

TALKS

Grey-box Concolic Testing on Binary Code *May 2019*
Paper presentation at 41st ACM/IEEE International Conference on Software Engineering (ICSE)
Montreal, Canada

ACADEMIC ACTIVITIES

Student Volunteer
ICSE 2020

External Reviewer
ASIACCS 2018, ASIACCS 2019

HONORS AND AWARDS

Best Paper Award in NDSS BAR 2019 *Feb 2019*
NDSS Workshop on Binary Analysis Research (BAR)

MSIT Minister Prize in Data Challenge 2018 *Dec 2018*
Korea Internet and Security Agency (KISA)

B.S Summa Cum Laude Graduate *Feb 2015*
Department of Computer Science & Engineering, Seoul National University

MSIT Minister Prize in Information Security Education Program, *BoB* *Feb 2014*
Korea Information Technology Research Institute (KITRI)

8th Place in DEFCON 20 CTF Final *Aug 2013*

National Scholarship for Science & Engineering *Mar 2011 - Feb 2015*
Korea Student Aid Foundation (KOSAF)

RESEARCH & WORKING EXPERIENCE

Visiting Research at UC Berkeley *May 2015 - August 2015*
Worked for DARPA Cyber Grand Challenge (CGC) project
Advisor : Prof. Dawn Song

Research Assistant at Programming Research Laboratory *Sep 2013 - Feb 2015*
Advisor : Prof. Kwangkeun Yi

Research Assistant at Real-time Ubiquitous System Laboratory *Mar 2013 - July 2013*
Advisor : Prof. Chang-Gun Lee

Internship at SAP Labs, Korea *Dec 2012 - Jan 2013*
HANA DBMS development team

TEACHING EXPERIENCE

Information Security Laboratory TA *2017-2018 Spring Semester*
`https://softsec.kaist.ac.kr/courses/2018s-is521/`
`https://softsec.kaist.ac.kr/courses/2017s-is521/`

Program Analysis TA *2016 Spring Semester*
`http://ropas.snu.ac.kr/~kwang/4541.664A/16/`

Programming Language TA *2015 Fall Semester*
`http://ropas.snu.ac.kr/~kwang/4190.310/15/`

EXTRACURRICULAR ACTIVITIES

Computer Security Research Club, "Guardian" *Mar 2011 - Feb 2014*
Served as a club president in Jan. 2012 - Dec. 2012
`http://guardian.snucse.org/`

KISA Bug Bounty *Mar 2014, Aug 2015*
Korea Internet and Security Agency (KISA)
Reported vulnerabilities in Hancom Hwp & Daum PotPlayer (rewarded)
`https://www.krcert.or.kr/consult/software/vulnerability.do`

TECHNICAL SKILLS

Fluent in F# and OCaml
Static analysis based on abstract interpretation
Binary reverse engineering

REFERENCE

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