

Sungwoo Kim

A Ph. D. Student in Computer Science, Purdue University

sk@purdue.edu

<https://sung-woo.kim/>

RESEARCH INTERESTS	System Security, Program Analysis, Cyber-Physical System.	
EDUCATION	Purdue University , Dept. of Computer Science <i>Ph. D. in Computer Science</i> Advisors: Dave (Jing) Tian and Dongyan Xu	West Lafayette, IN, USA 2021–Now
	Kwangwoon University , Dept. of Electronics and Communications Eng. <i>B.S. in Electronics and Communications Engineering</i> Advisor: Suwon Park	Seoul, Republic of Korea 2014–2020
CONFERENCE PUBLICATIONS	[C2] Fuzz The Power: Dual-role State Guided Black-box Fuzzing for USB Power Delivery Kyungtae Kim, Sungwoo Kim , Kevin Buttler, Antonio Bianchi, Rick Kennell, Dave (Jing) Tian <i>32nd USENIX Security Symposium (Security'23), Anaheim, CA, August 2023 (USENIX '23)</i> Anaheim, CA, August 2023 <i>Acceptance Rate: TBA</i> [C1] ShadowAuth: Backward-Compatible Automatic CAN Authentication for Legacy ECUs Sungwoo Kim , Gisu Yeo, Taegyu Kim, Junghwan "John" Rhee, Yuseok Jeon, Antonio Bianchi, Dongyan Xu, and Dave (Jing) Tian <i>Proceedings of the 2022 ACM Asia Conference on Computer and Communications Security (ASIACCS '22)</i> Nagasaki, Japan, May 2022, <i>acceptance rate=18.4%</i>	
WORK EXPERIENCE	Purdue University , Dept. of Computer Science <i>Graduate Research Assistant</i> - Researching in-vehicle network security - Researching Bluetooth security	West Lafayette, IN, USA 2021–Now
	Inedit Corp. <i>Software Engineer</i> - Maintained a mobile application “brandazine” using Django REST Framework, Vue, and Cordova	Seoul, Republic of Korea Apr.–Jul. 2021
	Purdue University , Dept. of Computer Science <i>Research Intern</i> - Internship advisor: Dave (Jing) Tian - Researched in-vehicle network security	West Lafayette, IN, USA Aug. 2020– Jul. 2021
	F1Security <i>Software Engineer</i> - Developed a low-overhead Honeypot system for embedded devices - Developed a signature-based anti-virus system for web applications	Seoul, Republic of Korea May 2018–Jan. 2020
	Republic of Korea Cyber Operations Command <i>Sergeant; Software Engineer</i> - Developed military software	Republic of Korea Jun. 2016–Mar. 2018
	Korea Information Technology Research Institute <i>Trainee in “Best of the Best (BOB)” Program</i> - Trained security techniques: binary analysis, SQL injection, buffer overflow, etc. - Reported vulnerabilities discovered from a commercial car rental system	Seoul, Republic of Korea Jun. 2014–Jan. 2015

TEACHING EXPERIENCE	Hongik University High School	Seoul, Republic of Korea
	<i>Guest Lecturer</i> - Lectured about a software security	Jul. 07. 2023
	Hongik University High School	Seoul, Republic of Korea
	<i>Instructor</i> - Lectured modeling and programming for a quadruped robot dog	Mar.–Jul. 2021
PATENTS	[PT2] Honeynet System for Internet Of Things using Packet Virtualization Korean Patent No. 102062718 [PT1] Origin Tracking Method and System using DNS Server for Infected Systems Korean Patent No. 101961451	
CVE	Linux Kernel - CVE-2023-40283, CVE-2023-28866, CVE-2022-45934 Commercial Drone - CVE-2021-34125	
SKILLS	Programming Languages: C; Golang; Haskell; Erlang Web Application Framework: NestJS (Typescript); Spring (Kotlin and Java); .NET core (C#) User Interface Library / Framework: React; Vue; SCSS Software Tools: IDA Pro; Ghidra; OllyDBG	