

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	[C1] ShadowAuth: Backward-Compatible Automatic CAN Authentication for Legacy ECUs Sungwoo Kim , Gisu Yeo, Taegy 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 on in-vehicle network security - Researching on Bluetooth security	West Lafayette, IN, USA 2021–Now
	Inedit Corp. <i>Software Engineer</i> - Maintained a mobile application “brandazine” using Django REST Framework, Vue.js, 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 on 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
	Hongik University High School <i>Instructor</i>	Seoul, Republic of Korea Mar.–Jul. 2021

- Lectured modeling and programming for a quadruped robot dog

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

CVE-2022-45934

SKILLS

Programming Languages: C; Golang; Erlang

Web Application Framework: Spring (Kotlin and Java); .NET core (C#); Django (Python); Koa (JS)

User Interface Library / Framework: React; Vue; SCSS

Software Tools: IDA Pro; Ghidra; OllyDBG