

Sungwoo Kim

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<https://swkim101.github.io>

RESEARCH INTERESTS	System Security, Program Analysis, Cyber-Physical System.	
EDUCATION	Purdue University , Dept. of Computer Science <i>Ph. D. in Computer Science</i> Co-advised: 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
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>Graduate Research Assistant</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 a 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> - Lectured modeling and programming for a quadruped robot dog	Seoul, Republic of Korea Mar.–Jul. 2021
CONFERENCE PUBLICATIONS	[C1] (TBA) 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 Proceedings of the 2022 ACM Asia Conference on Computer and Communications Security (ASIACCS)	

'22)

Nagasaki, Japan, May 2022, *acceptance rate*=18.4%

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

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