

# Sungwoo Kim

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

[sk@purdue.edu](mailto:sk@purdue.edu)

<https://swkim101.github.io>

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RESEARCH INTERESTS	System Security, Program Analysis, Cyber-Physical System.	
EDUCATION	<b>Purdue University</b> , 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
	<b>Kwangwoon University</b> , 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	<b>Purdue University</b> , 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
	<b>Inedit Corp.</b> <i>Software Engineer</i> - Maintained a mobile application “brandazine” using Django REST Framework, Vue.js, and Cordova	Seoul, Republic of Korea Apr.–Jul. 2021
	<b>Purdue University</b> , 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
	<b>F1Security</b> <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
	<b>Republic of Korea Cyber Operations Command</b> <i>Sergeant; Software Engineer</i> - Developed a military software	Republic of Korea Jun. 2016–Mar. 2018
	<b>Korea Information Technology Research Institute</b> <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
	<b>Hongik University High School</b> <i>Instructor</i> - Lectured modeling and programming for a quadruped robot dog	Seoul, Republic of Korea Mar.–Jul. 2021
CONFERENCE PUBLICATIONS	<b>[C1]</b> (TBA) ShadowAuth: Backward-Compatible Automatic CAN Authentication for Legacy ECUs <b>Sungwoo Kim</b> , 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 ( <b>ASIACCS</b> )	

'22)

*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, and OllyDBG