

Sungwoo Kim

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EDUCATIONS

Purdue University

Ph. D. in Computer Science

- Co-advised: Dave (Jing) Tian and Dongyan Xu

West Lafayette, Indiana

Aug. 2021 – Now

Kwangwoon University

B.S. in Electronics and Communications Engineering

- Advisor: Suwon Park

Seoul, Republic of Korea

Mar. 2014 – Feb 2020

WORK EXPERIENCES

Purdue University

Research Assistant

- Researching on: vehicle and Bluetooth security

West Lafayette, Indiana

Aug. 2021 – Now

Inedit Corp.

Software Developer

- Maintained a mobile application “brandazine” using Django REST Framework, Vue.js, and Cordova

Seoul, Republic of Korea

Apr. 2021 – Jul. 2021

Purdue University

Research Intern, Department of Computer Science

- Internship advisor: Dave (Jing) Tian
- Researched on securing the Controller Area Network (CAN) communications using binary analysis

West Lafayette, Indiana

Aug. 2020 – Feb. 2021

F1Security

Researcher

- Developed a low-overhead Honeypot system for embedded devices
- Developed an anti-virus system for web servers

Seoul, Republic of Korea

May 2018 – Jan. 2020

Republic of Korea Cyber Operations Command

Sergeant

- Developed a military software

Seoul, Republic of Korea

Jun. 2016 – Mar. 2018

Korea Information Technology Research Institute

Trainee at the “Best of the Best (BoB)” Program

- Trained and practiced security techniques: binary analysis, SQL injection, buffer overflow, etc.
- Reported vulnerabilities discovered from a commercial car rental system

Seoul, Republic of Korea

Jun. 2014 – Dec. 2014

TEACHING EXPERIENCES

Instructor

SpotMicro, Embedded Software Programming

- Lectured an embedded system on a quadruped robot dog

Hongik University High School

Mar. 2021 – Jul. 2021

PATENTS

Honeynet System for Internet Of Things using Packet Virtualization

Korean Patent

- Proposed a new technique for handling huge packets in hardware constrained systems
- Patent No.: 102062718

Jul. 2019

Origin Tracking Method and System using DNS Server for Infected Systems

Korean Patent

- Proposed a new technique for tracking the senders of DNS queries under network address translators (NAT)
- Patent No.: 101961451

Oct. 2018

ADDITIONAL INFORMATION

System Language: C, Golang

HTTP(S) Service Framework: Spring(Kotlin and Java), .NET core(C#), Django(Python)

User Interface Library / Framework: React, Vue, SCSS

Software Tools: IDA Pro, Ghidra, and OllyDBG

Languages: Native Korean; Proficient in English