Sungwoo Kim

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EDUCATIONS

Purdue University   West Lafayette, Indiana
Ph. D. in Computer Science   Aug. 2021 – Now
  - Co-advised: Dave (Jing) Tian and Dongyan Xu

Kwangwoon University   Seoul, Republic of Korea
B.S. in Electronics and Communications Engineering   Mar. 2014 – Feb 2020
  - Advisor: Suwon Park

WORK EXPERIENCES

Inedit Corp.   Seoul, Republic of Korea
Software Developer   Apr. 2021 – Jul. 2021
  - Maintained a mobile application "brandazine" using Django REST Framework, Vue.js, and Cordova

Purdue University   West Lafayette, Indiana
Research Intern, Department of Computer Science   Aug. 2020 – Feb. 2021
  - Internship advisor: Dave (Jing) Tian
  - Researched on securing the Controller Area Network (CAN) communications using binary analysis

F1Security   Seoul, Republic of Korea
Researcher   May 2018 – Jan. 2020
  - Developed a low-overhead Honeypot system for embedded devices
  - Developed an anti-virus system for web servers

Republic of Korea Cyber Operations Command   Seoul, Republic of Korea
Sergeant   Jun. 2016 – Mar. 2018
  - Developed a military software

Korea Information Technology Research Institute   Seoul, Republic of Korea
Trainee at the "Best of the Best (BoB)" Program   Jun. 2014 – Dec. 2014
  - Trained and practiced security techniques: binary analysis, SQL injection, buffer overflow, etc.
  - Reported vulnerabilities discovered from a commercial car rental system

TEACHING EXPERIENCES

Instructor   Hongik University High School
SpotMicro, Embedded Software Programming   Mar. 2021 – Jul. 2021
  - Lectured an embedded system on a quadruped robot dog

PATENTS

Honeynet System for Internet Of Things using Packet Virtualization   Jul. 2019
Korean Patent
  - Proposed a new technique for handling huge packets in hardware constrained systems
  - Patent No.: 102062718

Origin Tracking Method and System using DNS Server for Infected Systems   Oct. 2018
Korean Patent
  - Proposed a new technique for tracking the senders of DNS queries under network address translators (NAT)
  - Patent No.: 101961451

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