



Minhyuk Cho

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"While many may excel, few possess the discipline to persevere consistently."

Education

Dankook University, Yongin-si

B.S. IN Mobile Systems Engineering

- Total GPA of 4.22/4.5, Major GPA of 4.23/4.5 (Credits Taken: 128/140)

Yongin, Korea

Mar. 2020 - Present

Experience

WhiteHat School, 3rd – Next-Generation Security Leader Training Program (BoB)

3rd Class Trainees

- Oranized by Korea Information Technology Research Institute (KITRI)
- Completed Core and Advanced Training in Information Security
 - Core: Security Ethics & Policy, Web Hacking, Network Hacking, System Hacking, Digital Forensics (Basics), Cloud Security (Basics)
 - Advanced: Incident Response, Threat Analysis, Digital Forensics
- Projects: Designed and implemented a log-based intrusion detection system (IDS) in AWS cloud environment

Gasan D.C., Korea

Mar. 2025 - Sep. 2025

Undergraduate Research Student, CSOS Lab.

Research Assistant Student

- Advisor Professor: Seong-Je Cho
- Participation in Research Projects
 - Development of an Autonomous Driving-Based Intelligent Building Energy and Environment Integrated Management System (iBEEMS), **KETEP**
 - Effective and Intelligent Framework for Mobile Platform-Based Vehicle Forensics, **NRF**
 - Development of Integrated Analysis Technology for Internal and External Automotive Artifacts Using Event-Based Experimental System, **IITP**

Yongin, Korea

Mar. 2024 - Jun. 2025

Republic of Korea Army, 66th Division

Network Operations and Maintenance Specialist

- Military Network & Computer Operator.
- Honorably discharged from the Republic of Korea Army as a Sergeant after full term of service.

Gapyeong, Korea

Aug. 2021 - Feb. 2023

Publications

International

• Journal

- Minhyuk Cho, Seungmin Lee, Sungwon Jeong, Seong-Je Cho, Minkyu Park, "AEGIS: Android Evidence Guard tool for Integrity and Survival", FSI: Digital Investigation (**SCI**), **Under Review**

• Conference

- Minhyuk Cho, SunJae Kim, Seong-Je Cho, "Effects of Timestamp Manipulation in a Car Audio Video Navigation System Connected to a Smartphone via Bluetooth: A Preliminary Study", **The 10th International Conference on Next Generation Computing (ICNGC) 2024. Clark, Philippines.**

Domestic

• Journal

- San Lee, MinHyuk Cho, JiHeun Jung, Seong-Je Cho, "Log Analysis Techniques for Identifying Timestamp Manipulation in Linux and Android Systems", **THE JOURNAL OF KOREAN INSTITUTE OF NEXT GENERATION COMPUTING (KCI)**, 2024.

• Conference

- MinHyuk Cho, San Lee, JiHeun Jung, SunJae Kim, Seong-Je Cho, "Detecting Timestamp Manipulation in Bluetooth-Connected Smartphone and Automotive Infotainment System", **Workshop on Dependable and Secure Computing (WDSC) 2024. Jeju, Korea.**
- MinHyuk Cho, MinSeo Jung, SuBin Kang, JungMin Yim, SeeHwan Yoo, "Security Vulnerability Analysis and Exploitation of the Copy-and-Patch JIT Compiler Mechanism in CPython", **Korea Computer Congress (KCC), 2025. Jeju, Korea. [Best Paper Award]**

Patents

Patent Application

1. Network Synchronization Environment Based Time Manipulation Detection Device and Method

- **MinHyuk Cho, JiHeun Jung, Seong-Je Cho**

- Application No: 10-2024-0156364

2. Apparatus and method for collecting and storing event data from mobile devices

- **MinHyuk Cho, Seungmin Lee, Seongwon Jeong, Seong-Je Cho**

- Application No: 10-2025-0067605

Projects

KITTY: Keep It Talk-safe To Youth

Project Member

- Selection of Dankook University's Representative Team
- Advancement to the Finals in the Digital Competition for Software-Centered Universities
- Developed a digital safety solution for children and adolescents to detect and prevent harmful online communication
- Selected as a representative team at DKU and advanced to the finals of a national software innovation competition
- Outcome: 1 mobile application service, 1 Sponsoring Company Award

Designed and implemented a log-based intrusion detection system (IDS) in AWS cloud environment

Project Member

- Designed and implemented intrusion detection systems across basic, intermediate, and advanced attack scenarios
- Developed initial prototypes using the AWS console, later transitioned to infrastructure-as-code with Terraform
- Documented all implemented scenarios in a structured security operations workbook

Security Vulnerability Analysis of JIT Compiler

Project Leader

- Analyzed vulnerabilities in the Copy-and-Patch JIT Compiler used in CPython
- Targeted ARM-based architectures for exploit development
- Successfully executed shellcode via syscall and memory overwrite to gain shell access
- Outcome: 1 domestic conference paper published

FISHER: Fraudulent Incoming Speech Handling and Event Recoder

Deep Learning & Security Part

- Participated in Deep Learning and Security Module Development.
- Developed a Deep Voice Detection Model to Identify Voice Phishing Attempts

AEGIS: Android Evidence Guard tool for Integrity and Survival

Project Leader

- Developed a forensic tool to address the limitations of adb logcat and bugreport in Android systems
- Collected logs from a forensic perspective and reconstructed timelines in report format
- Currently preparing an SCI-indexed research paper for submission to Forensic Science International or Computers & Security
- Outcome: 1 patent application filed, 1 International SCI-indexed journal paper (*Under Review*)

Timestamp Manipulation Detection Process Development

Projects Leader

- Designed a detection pipeline to identify manipulated timestamps via log analysis
- Implemented detection mechanisms for Linux systems and Android smartphone & Car connected over Bluetooth
- Outcome: 1 domestic conference paper, 1 international conference paper, 1 domestic KCI-indexed journal paper, 1 patent application filed

Awards / Scholars

AWARDS

2025 **Corporate Sponsorship Award**, Awarded by SPARTA, Seoul (Digital Competition 2025)

2025 **Excellence Paper Award**, Awarded by KIISE, Jeju (KCC 2025).

SCHOLARS

2025 **Academic Excellence Scholarship**, Awarded by Dankook University, Yongin (FALL).

2025 **Academic Excellence Scholarship**, Awarded by Dankook University, Yongin (SPRING).

2024 **Academic Excellence Scholarship**, Awarded by Dankook University, Yongin (FALL).

2024 **Mugunghwa Scholarship**, Awarded by Gyeonggi Nambu Provincial Police (SPRING).

2020 **SW Talent Scholarship**, Awarded by Dankook University, Yongin (SPRING).

Skills

Languages Korean(native), English(intermediate)

Programming Assembly Script, Python, JAVA, C/C++, LaTex

Tools	FTK Imager, Autopsy, Wireshark, ElfTool, Ollydbg, GDB, etc.
Cloud/IaC	AWS, Terraform
Certificated	AWS Certified Cloud Practitioner(CLF-C02), Linux Master Level 2, Craftsman Information Processing