Taeyeon Kim

System Security Researcher

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Education

POSTECH

B.S. in Computer Science **Feb 2022 – Aug 2026**
Major GPA: 3.77/4.3

Skills

Programming Languages: C/C++, Assembly(x86-64), Python, Kotlin, OCaml, Coq
Languages: Korean (Native), English (Fluent), Japanese (Intermediate)

Technical Interests

Vulnerability Analysis: Static analysis, Symbolic execution, Fuzzing
Computational Theory: Formal verification, Compiler
Cybersecurity: Reverse Engineering, Binary Exploitation

Experiences

Theori

Intern Researcher **Jul 2026 – Present**

Dreamhack Contents Creator **Jul 2026 – Present**
Writing a lecture on reverse engineering and developing a CTF challenge for cybersecurity education platform

CompSec Lab, POSTECH

Undergraduate Research Intern **Sep 2024 – Jun 2026**

Project: CFG Analysis Based Open-source Library Vulnerability Management **Feb 2025 – Jun 2026**
Developing a vulnerability management method for version controlled open-source libraries. Implemented a signature-based approach using control flow graphs for open-source libraries to track vulnerable code and its propagation

Project: KIISC-funded Open-source Linux Security Tool Research **Mar 2025 – Dec 2025**
Participated in a research project funded by Korea Institute of Information Security and Cryptology (KIISC) on **Security Threats and Countermeasures on Linux open-source security tools**; evaluated vulnerabilities in distributed Linux security tools using dataflow-aware fuzzing

Department of Computer Science and Engineering, POSTECH

Student Mentor **Aug 2024 – Dec 2025**

Operating System Mentor **Aug 2024 – Dec 2025**
Mentored students in CSED312 (Operating System); guided students by providing examples with Linux and visualized kernel source trees to improve understanding of OS components and their interactions

AUTOCRYPT

Intern **Jun 2024 – Aug 2024**

Internship **Jun 2024 – Aug 2024**
Analyzed the OP-TEE(Trusted Execution Environment) OS kernel; designed fuzzing framework architecture using AFL++ and harnesses for fuzzing tests. Analyzed crash cases and designed PoC(proof-of-concept) of exploits

Information and Communication Services, POSTECH

Security Audit — **Aug 2023 – Aug 2024**

Web service Security Audit — **Aug 2023 – Aug 2024**
Performed vulnerability analysis and penetration test for internal systems and public websites of university

PLUS (POSTECH Laboratory for Unix Security)

President — **Oct 2023 – Sep 2024**

Member — **Jun 2022 – Aug 2026**

Hacker — **Jun 2022 – Sep 2024**
Competed in CTF as a Reverse Engineering player. Authored reverse-engineering challenges, lectures and seminar for students

Outsourced CTF Challenge Authoring — **Aug 2023**
Authored reverse-engineering challenges for 2025 Whitehat School CTF

Honors & Awards

Research Project Presentation

2nd — **Dec 2025**
Presented research on **CFG Analysis Based Open-source Library Vulnerability Management** at the Department of Computer Science and Engineering, POSTECH. Awarded 2nd place among undergraduate research projects

PPC

3rd — **May 2023**
Competed in problem-solving competition PPC(POSTECH Programming Contest) in 2023. Achieved 3rd place among 28 teams

CTF Achievements

DEF CON CTF 34 4th Cold Fusion — **Aug 2026**

DEF CON CTF 33 10th Cold Fusion — **Aug 2025**

SSU CTF 2025 2nd PLUS — **Feb 2025**

Hack the DRONE 2024 Tech Award CompSec — **Dec 2024**

HITCON CTF 2024 6th Cold Fusion — **Nov 2024**

DEF CON CTF 32 9th Cold Fusion — **Aug 2024**

DreamHack Invitational 2024 Finalist Aplace — **May 2024**

HITCON CTF 2023 4th Program Fur Mocchi — **Nov 2023**

Curriculum-related Projects

Printer Hacking Project

CSED415: Computer Security — **Apr 2025 – May 2025**
Investigated full-chain exploitability of a network-shared printer in campus-wide network environment. Validated attack vectors via PoC exploits of known vulnerabilities over the network and local interfaces

TML Compiler on Virtual Machine

CSED321: Programming Language — **May 2024**
Developed TML(Typed Meta Language) compiler that generates assembly for a custom virtual machine. Engineered basic type inference systems and optimization techniques

TCP/IP Network Stack Implementation

CSED353: Computer Network **Mar 2024 – May 2024**
Implemented TCP/IP Network Stack in C++: TCP state machine, network interface and routing. Achieved 5Mbps throughput to a real network

RISC-V CPU Implementation

CSED311: Computer Architecture **Mar 2024 – May 2024**
Designed RISC-V multicycle CPU in Verilog, including pipelining, branch prediction, and cache memory

PintOS

CSED312: Operating System **Sep 2023 – Dec 2023**
Analyzed Linux kernel source code, implemented core kernel functionalities in C including process priority scheduling, system calls, virtual memory management

qwoqLab

CSED211: Introduction to Computer Software Systems **Sep 2023**
Solved CS:APP 'Bomb Lab' exercises using symbolic execution, developed automated solver for the exercise