

Subin Song

M.S. CANDIDATE IN COMPUTER SCIENCE · NETWORK SECURITY RESEARCHER

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Education

M.S. in Computer Science and Engineering (expected)

SEOUL NATIONAL UNIVERSITY

Seoul, South Korea

Mar. 2024 – Present

- Advisor: Prof. Taekyoung Kwon
- Courses: Real-Time Systems, Information Visualization and Visual Analytics, Topics in Computer Networks, etc.

B.S. in Computer Science and Engineering

SEOUL NATIONAL UNIVERSITY

Seoul, South Korea

Mar. 2019 – Feb. 2024

- GPA: 3.63/4.3 (Cum Laude — Top 6.7%)
- Courses: Internet Security, Operating Systems, Scalable High-Performance Computing, Compilers, Introduction to Modern Cryptography, Database, Data Communications, Topics in New Computer Technology (Software Formal Verification), etc.
- Thesis: *Challenges in Fuzzing the Linux Kernel Networking Subsystem with Syzkaller*

Research Interests

Network Security & Privacy Network protocol security, Identity management, Privacy-preserving technologies
Decentralized Web Decentralized messaging, Fediverse

Research Experience

Dept. of Computer Science - Duke University

VISITING SCHOLAR

Durham, NC, USA

Oct. 2025 – Present

- Advisor: Prof. Michael Reiter

Dept. of Computer Science and Engineering - Seoul National University

GRADUATE RESEARCHER

Seoul, South Korea

Mar. 2024 – Present

- Conducting research in the field of computer networks and security.
- Advisor: Prof. Taekyoung Kwon

Dept. of Computer Science and Engineering - Seoul National University

UNDERGRADUATE RESEARCHER

Seoul, South Korea

Jun. 2023 – Feb. 2024

- Advisor: Prof. Taekyoung Kwon

Publications

Seokwon Oh, Subin Song, Jungbum Lee, Gyeongheon Jeong, Hyunsoo Kim, Chang-gun Lee, and Taekyoung (Ted) Kwon. Oct. 2024. “A Study on GPS Spoofing Detection Based on Digital Twin.” In: *Annual Conference of KIPS*. Gwangju, Korea, (Oct. 2024), 108–111. doi:10.3745/PKIPS.Y2024M10A.108.

Su-Bin Song, Min-Kyung Park, and Tae-Kyoung Kwon. May 2024. “A Study on Fuzzing the Linux Kernel Networking Subsystem Using Syzkaller.” In: *Annual Conference of KIPS*. Pyeongchang, Korea, (May 2024), 323–326. doi:10.3745/PKIPS.Y2024M05A.323. Outstanding Paper Award (우수논문상).

Work Experience

Network Convergence & Security Lab (MMLAB) @ SNU

WEBMASTER

Seoul, South Korea

Aug. 2024 – Sep. 2025

- Hosted various lab web services including the website, wiki, and chat service.
- Migrated data from old website (XE3-based) to a new website (Wordpress-based) using SQL scripts.
- Integrated the lab’s services with Authentik single sign-on (SSO) using OpenID Connect (OIDC).

SNU CSE Department

EMAIL SERVER ADMINISTRATOR

Seoul, South Korea

Aug. 2024 – Sep. 2025

- Managed and administered the department’s email server.
- Provided support for faculty and students regarding email-related issues.

TmaxTibero

INTERN SOFTWARE ENGINEER

Seongnam, South Korea

Jul. – Aug. 2022

- Developed a dynamic memory allocator API for Intel® Optane™ Persistent Memory.
- Code: <https://github.com/tibero-oss/hybrid-memory-allocator>

Teaching & Mentoring Experience

Teaching Assistant, Internet Security and Privacy

DEPT. OF COMPUTER SCIENCE AND ENGINEERING, SEOUL NATIONAL UNIVERSITY

Mar. – Jun. 2024

Projects

LAB PROJECTS

Research on Email Security Threats and Mitigation Technologies (Project Lead)

NETWORK CONVERGENCE & SECURITY LAB @ SNU, SPONSORED BY KOREA INSTITUTE OF INFORMATION SECURITY & CRYPTOLOGY (KIISC).

Feb. – Oct. 2025

FASTEN: A Fast, Automated, Standard-friendly and Trustworthy Edge Networking Framework for IoT Services

NETWORK CONVERGENCE & SECURITY LAB @ SNU, SPONSORED BY NATIONAL RESEARCH FOUNDATION OF KOREA (NRF).

Jun. 2023 – Oct. 2025

OTHER PROJECTS

PktFlowVis: Visual Analytics for Network Packet Capture Files

PROJECT FOR SNU INFORMATION VISUALIZATION AND VISUAL ANALYTICS COURSE (M1522.000500)

Oct. – Dec. 2024

- Visual analytics tool for network packet capture files.
- Skills: D3.js, React.js
- Code: <https://github.com/ssubinsong/pktflowvis>

ReJourN: The Precious Memory Box for Traveling

PROJECT FOR SNU PRINCIPLES AND PRACTICES OF SOFTWARE DEVELOPMENT COURSE (M1522.002400)

Sep. – Dec. 2021

- A web application for travelers to record their travel memories.
- Skills: TypeScript, React.js, Bootstrap 5, Django, PostgreSQL, Docker
- Role: Frontend dev & deployment (DevOps).
- Code: <https://github.com/swsnu/swpp2021-team1>

Wisecoop Website v1 (wisecoop.kr)

Mar. – Apr. 2021

- Website for Wisecoop, a co-op for software education.
- Skills: React.js, Bootstrap 4, Google Blogger API
- Code: <https://github.com/ssubinsong/wisecoop.kr-old>

Extracurricular Activity

Bacchus (SNU Administrator Group)

MEMBER

Seoul, South Korea

Mar. – Dec. 2024

- Took part in educating new group members about network administration and security.

Conference Presentations

ORAL PRESENTATIONS

Challenges in Fuzzing the Linux Kernel Networking Subsystem with Syzkaller

2024 ANNUAL SYMPOSIUM OF KIPS (ASK)

Online

May 2024

Honors and Awards

Outstanding Paper Award (우수논문상)

2024 ANNUAL SYMPOSIUM OF KIPS (ASK)

Pyeongchang, South Korea

May 2024

- Paper title: *Challenges in Fuzzing the Linux Kernel Networking Subsystem with Syzkaller.*

Technical Skills

System Administration Docker, Linux, Email server administration

Web Development React.js, Django, D3.js

Programming Languages C(++), Python, JavaScript/TypeScript

Languages

Korean Native

English Fluent

References

Taekyoung Kwon, Professor

DEPT. OF COMPUTER SCIENCE AND ENGINEERING, SEOUL NATIONAL UNIVERSITY

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