

Jinseo Lee

Personal Data

Place and Date of Birth: Republic of Korea | 08 February 2002
Address: 27, Eoeun-ro 42beon-gil, Yuseong-gu, Daejeon, Republic of Korea
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Research Interests

Network security and privacy; Internet measurement; censorship and surveillance.

Education

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea
Ph.D. in Computer Science Feb 2025– (Expected)
M.S. in Computer Science Aug 2023–Feb 2025 (Expected)
- Advisor: Prof. Min Suk Kang
- Master Thesis: *Measuring DNS-over-HTTPS Downgrades: Prevalence, Techniques, and Bypass Strategies*

B.S. in Computer Science Feb 2019–Aug 2023
- Double Major in Business and Technology Management
- *Latin Honors: Cum Laude*

Awards and Honors

KAIST Full Scholarship for Graduate Program Aug 2023–Feb 2025 (Expected)
Government-Sponsored Scholarship

KAIST Full Scholarship for Undergraduate Program Feb 2019–Aug 2023

Referred Publication

[1] **Jinseo Lee**, David Mohaisen, and Min Suk Kang. 2024. Measuring DNS-over-HTTPS Downgrades: Prevalence, Techniques, and Bypass Strategies. *Proc. ACM Netw.* 2, **CoNEXT4**, Article 28 (December 2024), 22 pages. <https://doi.org/10.1145/3696385>

Research Projects

Aug 2023–Current	Tor Vulnerability We discovered a vulnerability in a specific component of Tor and are collaborating with the Tor developers to address it. Advisor: Prof. Min Suk Kang Cooperated with Hobin Kim
Jan 2023–June 2024	Downgrades of DNS-over-HTTPS We measured the current status of DNS-over-HTTPS downgrades worldwide, uncovering their prevalence, techniques, and bypass strategies. Advisor: Prof. Min Suk Kang Cooperated with Prof. David Mohaisen

Apr 2023–Jun 2023	<p>Advanced Skipping Counter: A State-of-the-Art Counter for Skipping Ropes Using Sensors</p> <p>We recognized a limitation with existing methodologies for automatic jump counting, as they lacked the ability to differentiate between different types of jumps and necessitated complex setups. In response, we developed and implemented an advanced jump counter that possesses enhanced capabilities in distinguishing jump types while requiring minimal resources (only the device and an Android smartphone). For further details, the source code and a concise report can be accessed on GitHub.</p> <p>Cooperated with Nayoung Oh</p>
Mar 2023–May 2023	<p>Qualcomm-KAIST Innovation Awards 2023</p> <p>We participated in the Qualcomm-KAIST Innovation Award 2023, a hackathon aimed at developing a reliable machine learning model to predict the Myers-Briggs Type Indicator (MBTI) of individuals using only the questions and corresponding answers. The source code and report for this project are available on GitHub.</p> <p>Cooperated with Seogyong Jeong and Joohee Kim</p>
Oct 2022–Dec 2022	<p>DUDE (DUplication DETector)</p> <p>We developed a GitHub Action designed to detect duplicate GitHub issues and notify their respective authors. You can find it on the GitHub Marketplace.</p> <p>Advisor: Prof. Kihong Heo</p>
Mar 2022–June 2022	<p>Improved DialogueRNN: Dealing with Emotional Shift</p> <p>We conducted research on emotion detection using artificial intelligence, which exhibited subpar performance when analyzing dialogues with rapid changes in emotion. We identified this challenge as the <i>emotional shift problem</i> and proposed a solution to address it, resulting in enhanced performance.</p> <p>Cooperated with Darae Lee, Jonghee Jeon, and Joohee Kim</p>

Skills

Programming Languages	<p>Beginner: Rust, Java</p> <p>Intermediate: OCaml</p> <p>Advanced: C, C++, Python</p>
Languages	<p>Korean: Native</p> <p>English: Professional Working Proficiency</p> <p>Norwegian: Elementary Proficiency</p>

Leadership Experience

<p>Graduate Student Representative KAIST School of Computing</p>	Aug 2023–February 2024
<p>Representative KAIST Catholic Student Union Sanarae</p>	Sep 2022–Jun 2023
<p>Standing Committee Daejeon Catholic Council of University Students</p>	Apr 2021–Dec 2021
<p>Executive KAIST Catholic Student Union Sanarae</p>	Sep 2019–Dec 2020