Jinseo Lee

Personal Data

Place and Date of Birth: Republic of Korea | 08 February 2002

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Research Interests

· Information security: network security and privacy

• Artificial intelligence: natural language processing

Education

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea

M.S. in School of Computing

Aug 2023-Feb 2025 (Expected)

- Advisor: Prof. Min Suk Kang

B.S. in School of Computing

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

Research Projects

Aug 2023—Current | Tor Vulnerability

We have theoretically demonstrated a vulnerability in a specific component of Tor and are currently

conducting real-world experiments to prove its feasibility.

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

Advanced Skipping Counter: A State-of-the-art Counter For Skipping Ropes Using Sensors

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

Cooperated with Nayoung Oh

Mar 2023 – May 2023

Qualcomm-KAIST Innovation Awards 2023

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.

Cooperated with Seogyeong Jeong and Joohee Kim

Oct 2022—Dec 2022

DUDE (DUplication DEtector)

We developed a GitHub Action designed to detect duplicate GitHub issues and notify their respective authors. You can find it on the GitHub Marketplace.

Advisor: Prof. Kihong Heo

Mar 2022—June 2022

Improved DialogueRNN: Dealing with Emotional Shift

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 'emotional shift problem' and proposed a solution to address it, resulting in enhanced

performance.

Cooperated with Darae Lee, Jonghee Jeon, and Joohee Kim

Skills

Programming Languages

Beginner: Rust, Java Intermediate: OCaml

Advanced: C, C++, Python

Korean: Native

Languages

English: Professional working proficiency

Norwegian: Elementary proficiency

Leadership Experience

Graduate Student Representative

Aug 2023-February 2024

KAIST School of Computing

Representative

Sep 2022—Jun 2023

KAIST Catholic Student Union Sanarae

Standing Committee

Apr 2021—Dec 2021

Daejeon Catholic Council of University Students

Executive

Sep 2019-Dec 2020

KAIST Catholic Student Union Sanarae