Yoonkyo Jung

Ph.D. Student · Electrical and Computer Engineering

University of Maryland, College Park

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Brief Bio

Yoonkyo Jung is a Ph.D. student in the Department of Electrical and Computer Engineering at the University of Maryland, College Park, under the supervision of Prof. Sennur Ulukus. His research interests include privacy-preserving networks, machine learning-driven networked systems, user privacy, computer security, and future wireless networks.

Education

University of Maryland, College Park (UMD)
Maryland, United States

Ph.D. in Electrical and Computer Engineering
Aug. 2024 - present

- Advisor: Prof. Sennur Ulukus

Seoul National University (SNU)
Seoul, South Korea

M.S. in Computer Science and Engineering
Mar. 2019 - Feb. 2021

- Network Convergence & Security Laboratory
- Advisor: Prof. Ted "Taekyoung" Kwon
- Thesis: Consistency Analysis between Privacy Policy and Mobile Application [pdf]

Republic of Korea Air Force Academy (ROKAFA)
Cheongju, South Korea

B.S. in System Engineering
Mar. 2013 - Feb. 2017

- Thesis: Efficiency Validation and Improvement of Bus Booking Mobile Application

Professional Experience

Department of Computer Science, ROKAFA
Cheongju, South Korea

Assistant Professor
Apr. 2022 - Jul. 2024

Department Chair
Jan. 2023 - Jan. 2024

Full-time Lecturer
Feb. 2021 - Mar. 2022

- Hired new faculty members and taught more than ten classes
- Established Department of AI and planned a curriculum

Aerospace Force Weapon Systems Laboratory, ROKAFA
Cheongju, South Korea

Researcher
Feb. 2021 - Jul. 2024

Deputy Director
Jan. 2023 - Jan. 2024

- Participated in three research projects related to weapon systems
- Held lab seminars by inviting experts both in and out of the school

Aerospace Research Institute, ROKAFA
Cheongju, South Korea

Project Management Officer
Dec. 2021 - Dec. 2022

- Managed national projects of R.O.K Air Force and organized academic conferences

Department of Computer Science and Engineering, SNU
Seoul, South Korea

Research Assistant
Feb. 2019 - Jan. 2021

- Participated in research projects related to network, privacy, and indoor localization

Air Defense Missile Command, ROKAF
Osan, South Korea

Radar Maintenance Officer
Apr. 2018 - Jan. 2019

- Maintained Ballistic Missile Early-warning Radar as a maintenance team leader
- Took charge of interpreting for resident technical agents from other countries

Education and Training Command, ROKAF *Jinju, South Korea*

Recruit Training Officer *Mar. 2017 - Mar. 2018*

- Educated over 7000 airmen as a commander of 1st Airman Training Company

Publications

<Journal>

Analysis of the Performance Improvement Evaluation Index of Air Force Advanced Trainers (T-50 Series) and Deriving Priorities *2023*

Byungho Jung, Seong In Hwang, **Yoonkyo Jung**, Namkyu Lim

Journal of the Korean Society of Supply Chain Management, Vol.23, No.2 [pdf]

Reliability Analysis of Privacy Policies Using Android Static Analysis *2023*

Yoonkyo Jung

KIPS Transactions on Computer and Communication Systems, Vol.12, No.1 [pdf]

Design of Surveillance Device Control System Using Audio Beamforming *2022*

Jaesung Sim, **Yoonkyo Jung**

Journal of Military Science Research, Vol.73, No.2 [pdf]

Development and Performance Evaluation of Chatbot System for Office Automation *2022*

Yoonkyo Jung

Asia-Pacific Journal of Convergent Research Interchange, Vol.8, No.10 [pdf]

<Conference>

Development of Multi-copter Propeller Distortion Measurement Device Using Three-side Image Analysis *2022*

Songhyeon Kim, Jaesung Sim, **Yoonkyo Jung**

KIISE Korea Computer Congress [pdf] [poster]

Reliability Analysis of Privacy Policies Based on Android Static Analysis *2022*

Yoonkyo Jung

Annual Spring Conference of KIPS [pdf] [slide]

A Study on the Development and Performance Improvement of Chatbot for Office Automation *2022*

Junsoo Park, Youngjun Kim, **Yoonkyo Jung**

KIICE Spring Conference [pdf] [slide]

Android Remote Unlocking Service using Synthetic Password: A Hardware Security-preserving Approach *2021*

Sungmin Lee, **Yoonkyo Jung**, Jaehyun Lee, Byoungyoung Lee, Ted "Taekyoung" Kwon

IEEE Secure Development Conference (SecDev) [pdf] [slide]

Teaching

Republic of Korea Air Force Academy *Cheongju, South Korea*

Assistant Professor *Apr. 2022 - Jul. 2024*

- 2024 Spring: Network Programming, Embedded System, Artificial Intelligence (Course Evaluations: 5.0/5.0)
- 2023 Fall: Data Communication, Hacking and Defense, Convergence Capstone Design (Course Evaluations: 5.0/5.0)
- 2023 Spring: Network Programming, Embedded System, Convergence Capstone Design (Course Evaluations: 4.95/5.0)
- 2022 Fall: Hacking and Defense (Course Evaluations: 5.0/5.0)
- 2022 Spring: Embedded System (Course Evaluations: 5.0/5.0))

Republic of Korea Air Force Academy *Cheongju, South Korea*

Full-time Lecturer *Feb. 2021 - Mar. 2022*

- 2021 Fall: Software Programming, Data Structure, Hacking and Defense (Course Evaluations: 4.87/5.0)
- 2021 Spring: Software Programming, Embedded System (Course Evaluations: 4.97/5.0)

Seoul National University *Seoul, South Korea*

Teaching Assistant *Sep. 2020 - Dec. 2020*

- 2020 Fall: Internet Security and Privacy

Research Projects

Concept of Optimal Requirements for Air Force Future Basic Trainers *ROKAFA*
Korea Aerospace Industries (KAI) *Oct. 2023 - Jun. 2024*

Performance Improvement of Air Force Advanced Trainers (T-50 Series) *ROKAFA*
Agency for Defense Development (ADD) *Apr. 2023 - Jul. 2023*

Development and Implementation of Air Force Live-Virtual-Constructive (LVC) Architecture *ROKAFA*
Korea Aerospace Industries (KAI) *Dec. 2021 - Dec. 2022*

Versatile Network System Architecture for Multi-dimensional Diversity *SNU*
Institute for Information & Communication Technology Planning (IITP) *Jan. 2020 - Dec. 2020*

Smartcampus: Research on Localization Scheme based on Multiple Sensors *SNU*
Samsung Electronics *May. 2019 - Apr. 2020*

Research on Security Scheme for Interconnection of Heterogeneous Networks *SNU*
Electronics and Telecommunications Research Institute (ETRI) *Jun. 2019 - Nov. 2019*

Honors & Awards

2024   **Full Scholarship for Graduate Studies (PhD),** Ministry of National Defense, Republic of Korea
2023   **Commendation of Lieutenant General,** Distinguished Service in the Graduation Ceremony, ROKAFA
2022   **Best Paper Award,** Korea Computer Congress, KIISE
2021   **Excellence Award,** Creative and Innovation Idea Hackathon, ROKAF
2019   **Full Scholarship for Graduate Studies (MS),** Ministry of National Defense, Republic of Korea
2016   **Best Undergraduate Paper Award,** Student Paper Contest, KOPOMS

Professional Memberships

2023   **Member,** Chungbuk AI-SW Education Sharing Council
2023   **Member,** Korea Society of Computer Information (KSCI)
2023   **Member,** Korean Institute of Information Technology (KIIT)
2022   **Member,** Korea Institute of Information and Communication Engineering (KIICE)
2022   **Member,** Korea Convergence Technology Research Society (KTCRS)
2022   **Lifetime Member,** Korea Information Processing Society (KIPS)
2021   **Lifetime Member,** Korean Institute of Information Scientists and Engineers (KIISE)

Extracurricular Activity

2022   **Founder & Instructor,** ROKAFA Programming Club
2022   **Reviewer,** Asia-Pacific Journal of Convergent Research Interchange
2020   **Reviewer,** International Conference on ICT Convergence
2019   **Researcher,** Samsung Electronics SNU R&D Center
2019   **Program Chair,** eLearning Competition, Global IT Challenge
2019   **Technical Advisor,** Global IT Challenge, RI Korea
2016   **Battalion Cadet Commander,** Cadet Leadership, ROKAFA
2016   **Squadron Cadet Commander,** Cadet Leadership, ROKAFA

Skills

Languages   Python, C, C++, JavaScript, SQL, JAVA, Kotlin, GO
Technologies   Docker, Git, LaTeX, MySQL, NoSQL(MongoDB), HTML/CSS
Platforms   Linux(Ubuntu), Windows, Nginx, AWS, Oracle Cloud, Azure
Frameworks   TensorFlow/Keras, Pytorch