Yoonkyo Jung

Assistant Professor · Prosective Ph.D student

575, Danjae-ro, Cheongju-si, Chungcheongbuk-do, Republic of Korea

✉ ykjung.rokafa@gmail.com | 🏠 yoonkyo.info | 🄳 yoonkyo | 🅻 yoonkyo

Brief Bio

Yoonkyo Jung is an Air Force captain from the Republic of Korea, currently working as a tenure-track assistant professor in the Department of Computer Science at Republic of Korea Air Force Academy (ROKAFA). He was chosen as a recipient of a tuition scholarship funded by the R.O.K Ministry of National Defense. His research interests focus on privacy-preserving networks, machine learning-driven networked systems, and future wireless networks.

Education

Seoul National University (SNU)
Seoul, South Korea

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

- Network Convergence & Security Laboratory
- Advisor: 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

Department Chair
Jan. 2023 - now

Assistant Professor
Apr. 2022 - now

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

Deputy Director
Jan. 2023 - now

Researcher
Feb. 2021 - now

- Participated in three research projects related to the weapon system
- 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 Israel

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>

A Survey from Federated Learning to Split Learning _TBD_

Yoonkyo Jung, Jinyi Yoon

IEEE Access (To be submitted)

Analysis and Prioritization of the Performance Improvement Evaluation Index for Air Force Advanced Trainers (T-50 Series) _TBD_

Byungho Jung, **Yoonkyo Jung**, Namkyu Lim

Journal of the Korean Society of Supply Chain Management (Under Review)

Reliability Analysis of Privacy Policies Using Android Static Analysis _2023_

Yoonkyo Jung

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

Design of Surveillance Device Control System Using Audio Beamforming _2022_

Jaesung Sim, **Yoonkyo Jung**

Journal of Military Science Research, Vol.73, No.2

Development and Performance Evaluation of Chatbot System for Office Automation _2022_

Yoonkyo Jung

Asia-pacific Journal of Convergent Research Interchange, Vol.8, No.10

<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

Reliability Analysis of Privacy Policies Based on Android Static Analysis _2022_

Yoonkyo Jung

Annual Spring Conference of KIPS

A Study on the Development and Performance Improvement of Chatbot for Office Automation _2022_

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

KIICE Spring Conference

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)

Teaching

Republic of Korea Air Force Academy _Cheongju, South Korea_

Assistant Professor _Apr. 2022 - now_

- 2023 Fall: Data Communication, Hacking and Defense, Convergence Capstone Design
- 2023 Spring: Network Programming, Embedded System, Convergence Capstone Design
- 2022 Fall: Hacking and Defense
- 2022 Spring: Embedded System

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
- 2021 Spring: Software Programming, Embedded System

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) *Sep. 2023 - Apr. 2024*

Performance Improvement of T-50 Series by the Flight Education and Training System *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: A Research on Localization Scheme based on Multiple Sensors *SNU*
Samsung Electronics *May. 2019 - Apr. 2020*

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

Honors & Awards

2024 **Full Scholarship for Graduate Studies (Ph.D)**, R.O.K Ministry of National Defense
2022 **Best Paper Award**, Korea Computer Congress, KIISE
2021 **Excellence Award**, Creative and Innovation Idea Hackathon, ROKAF
2019 **Full Scholarship for Graduate Studies (M.S)**, R.O.K Ministry of National Defense
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