Jahun Oh

Captain, Republic of Korea Army (ROKA)

---

jahunbest@gmail.com   Yeongcheon, North Gyeongsang, South Korea   +82 10-3313-0219

Research Interests	AI/ML for real-world robotics & automation, Human–AI systems for training & decision support

Research Experience

Korea Army Academy in Youngcheon   August 2023–Present
Assistant Professor (Aug 2024–Present); Instructor (Aug 2023–Aug 2024)

- Anomaly-based IDS (problem: multi-class drift) → evaluated continual-learning strategies and deployment considerations; journal article in *Defense and Security* (2024).
- Unification strategy analytics (problem: FIMI/disinformation) → machine-learning anomaly detection over forum streams; classified report to Ministry of Unification (2024).
- Korea Ministry of National Defense Proposal(AX-Sprint, $200,000) on-prem LLM-collaborated MLOps/data pipeline for isolated networks; authored SOPs. *On Review*
- Supervised cadet capstones and data science contests;.

Seoul National University, Seoul, South Korea   March 2024–November 2024
Future Military Strategy Research Program [**Completion with Honors**]

- Authored "Introduction of Hyperautomation for Non-Combat Administrative Tasks..." (Future Warfare Research Center); received **Best Paper Award** (2024).
- Designed a reference architecture for hyperautomation (process mining → RPA/OCR→workflow orchestration → data governance) targeting manpower-constrained units.
- Prototyped secure on-prem pipelines and drafted deployment SOPs/checklists for isolated networks.
- Conducted officer interviews and task analyses; translated doctrine/policy constraints into technical requirements and evaluation measures.
- Packaged reproducible artifacts (diagrams, configurations, templates) to support follow-on studies and adoption.

Soft Interaction Lab (Texas A&M University)   August 2022–August 2023
Graduate Research Assistant (Advisor: Jinsil Hwaryoung Seo)

- VR SBIRT training with conversational-AI virtual patient (problem: scalable clinical practice). Built dialogue pipeline (intent/entity, state tracking, policy) and integrated speech I/O with Unity and Web interface.
- Ran formative user studies (usability/learning signals) and co-authored *AIED 2023* paper with outcome details (pp. 701–707; DOI below).
- Curated and annotated SBIRT dialogue datasets; defined intent/entity schema and created evaluation scripts for turn-level and task-level outcomes.
- Prototyped policy variants (rule-based vs. learned) with automated regression tests; compared conversation success and trial completion in pilot runs.
- Produced a reproducible experiment package (configs, seeds, data-handling notes) in an internal lab repository to support future studies.

LENS Lab (Texas A&M University)   August 2022–August 2023
Master Student (Advisor: Srinivas Shakkottai)

- Designed deep RL offloading policies for cloud robotics navigation using Clearpath Jackal in ROS/Gazebo under variable network conditions.
- Conducted real-world experiments; implemented DQN/Double-DQN and benchmarked against heuristic baselines.
- Thesis: *Network Offloading Policies for Cloud Robotics: Enhanced Situation-Aware Robot Navigation Using Deep Reinforcement Learning* (Aug 2023).
- Built network emulation to vary latency/jitter/bandwidth; profiled navigation performance and policy robustness under constrained links.

Education	**Seoul National University**, Seoul, South Korea	March 2024–November 2024

Future Military Strategy Research Program [**Completion with Honors**]

Texas A&M University, College Station, TX, United States — August 2021–August 2023
Master of Science in Computer Engineering
GPA: overall 3.33/4.0†
†Single F (Fall 2022) for documented personal reasons; GPA excl. 3.75/4.0. Official Transcript.

Korea Military Academy, Seoul, South Korea — February 2013–February 2017
Bachelor of Science (Dual Major: Military Science; Information Science)
GPA: overall 3.73/4.3; Information Science GPA 4.14/4.3

Publications

J. Oh et al. *Korea Unification Strategy in the Digital Age* (Classified). Korea Ministry of Unification, December 2024.

J. Oh. *Introduction of Hyperautomation for Non-Combat Administrative Tasks to Maintain Combat Power in the Era of Demographic Cliff: Design Framework.* Future Warfare Research Center, Seoul National University, November 2024. [**Best Paper Award**]

J. Park, **J. Oh**. *Adoption of Continual Learning Strategies in Anomaly-Based Network Intrusion Detection Systems for Multi-Class Classification. Defense and Security*, February 2024.

I. Kang, **J. Oh**. *Review of the Application of Digital Twins to Defense. Journal of Digital Contents Society*, January 2024.

J. Oh et al. *A Study on Response Strategies for North Korea–Related Disinformation.* Korea Ministry of Unification, December 2023.

J. H. Seo, R. Chaudhury, **J. Oh**, C. Kicklighter, T. Arguello, E. Wells-Beede, and C. Weston. *Development of Virtual Reality SBIRT Skill Training with Conversational AI in Nursing Education.* In: *Artificial Intelligence in Education (AIED 2023), Lecture Notes in Computer Science.* Cham: Springer, 2023, pp. 701–707. doi:10.1007/978-3-031-36272-9_59.

Grants & Awards

Scholarship for Graduate Studies(PhD), Ministry of National Defense, South Korea - $150,000	August 2025
Best Paper Award, Future Warfare Research Center, Seoul National University	November 2024
Distinguished Professor Award, Korea Army Academy in Youngcheon	July 2024
U.S. Army Certificate of Appreciation, NEO Operation Director, U.S. 8th Army	March 2021

Teaching Experience

Korea Army Academy in Youngcheon	Aug 2023–Present
- Introduction to Artificial Intelligence	Fall 2023
- Programming I (Python)	Spring 2024
- AI Capstone Design	Fall 2024

References

Prof. Srinivas Shakkottai
Associate Professor, Department of Electrical and Computer Engineering, Texas A&M University,
Email: sshakkot@tamu.edu

Prof. Jinsil Hwaryoung Seo
Associate Professor, Department of Visualization (Soft Interaction Lab), Texas A&M University,
Email: hwaryoung@tamu.edu

Prof. Donghui Park
Associate Professor, Chief of KAAY Cybersecurity & Policy Research Center, Korea Army Academy in Youngcheon, **Email: cyberwar@kaay.ac.kr**