Dayeon Kang

📞 +1 (413) 472-1773   ✉ dayeonkang@umass.edu   🌐 dayeonkang99.github.io

RESEARCH INTERESTS

I am interested in the intersection of security, privacy, network systems, cloud systems, and machine learning. This is related to the following areas: 1) Mitigating security or privacy challenges and defects of network systems in cloud settings. 2) How machine learning could support network and cloud systems using network data.

Keywords: Security and Privacy on Computer Networks, Network and Cloud Systems, Serverless Cloud, Machine Learning

EDUCATIONS

University of Massachusetts Amherst (UMass Amherst), MA, USA   Sep. 2023 – Present
MS/PhD Student in Computer Science
- Cumulative GPA: 3.85/4.0, as of Fall 2024
- Advisors: Prof. Amir Houmansadr, Prof. Pubali Datta

Ewha Womans University (Ewha WU), Seoul, South Korea   Mar. 2019 – Aug. 2023
B.S. in Computer Science and Engineering
- Cumulative GPA: 4.16/4.3, *Summa Cum Laude*

PUBLICATIONS

Y. You, J. Yoon, **Dayeon Kang**, J. Kim, and H. Lee, "CollageMap: Tailoring Generative Fingerprint Map via Obstacle-Aware Adaptation for Site-Survey-Free Indoor Localization," Proceedings of IEEE Pervasive Computing and Communications *(IEEE PerCom), 2025*.

J. Yoon, Y. You, **Dayeon Kang**, J. Kim, and H. Lee, "GAN-Loc: Empowering Indoor Localization for Unknown Areas via Generative Fingerprint Map," Proceedings of IEEE International Conference on Sensing, Communication, and Networking *(IEEE SECON), 2024*.

Poster
Dayeon Kang, J. Kim, D. Kim, H. Kim, and K. Chae, "Grape Grade Discrimination System using Step-by-step Deep Learning Model and Drone Path Planning Algorithm," *Korea Computer Congress, 2022*.

RESEARCH EXPERIENCE

The Secure, Private Internet Research Group (SPIN), UMass Amherst
PhD Student (Advisor: Prof. Amir Houmansadr, Co-advisor: Prof. Pubali Datta)   Sep. 2023 – Present
- Building HTTP-based censorship circumvention proxy on cloud using serverless (e.g., AWS Lambda) attributes with Node.js
- Designing tools for observing IP reuse and (dangling DNS) attacks on serverless cloud environment and analyzing sensitive data leakage caused by IP reusing

Intelligent Networked Systems Lab, Ewha WU

Undergraduate Researcher (Advisor: Prof. HyungJune Lee)   Jul. 2021 – Feb. 2023

- Designed initial system to generate obstacle-aware map by reflecting degree of obstacles for each designated in-building structures
- Proposed new metric to calculate impacts of obstacles using proportion of obstacles
- Created Android application with Android Studio to measure Wi-Fi signal strength (e.g., RSSI)
- Implemented indoor localization purpose GAN using TensorFlow and participated in implementing federated learning model, particularly regularizing heterogeneous models (e.g., VGG, ResNet) sequentially trained on tasks

TEACHING & MENTORSHIP EXPERIENCE

Teaching Assistant (TA), UMass Amherst
- System Defense and Test (COMPSCI 561)   Spring 2024, Spring 2025
- Introduction to Computer and Network Security (COMPSCI 560)   Fall 2024

Peer Instructor (Tutor) in Major Courses, Ewha WU
- Computer Programming & Lab (36339-05)   Spring 2022
- Computer Architecture (20493-01)   Fall 2021, Fall 2022

Mentor of Undergraduate Research Volunteers (URV), UMass Amherst   Summer 2024, Winter 2025
- Instructed research projects undertaken by undergraduates and guided poster presentation

Mentor of 2022 Samsung Junior SW Creation Contest, Samsung SDS   Jul. 2022 – Aug. 2022
- Served as mentor to middle school student's environment-themed software project

HONORS & AWARDS

Honors

Jung-Hun Scholarship, Jung-Hun Scholarship Foundation   Mar. 2021 – Aug. 2023
Honors Scholarship (for academic excellence), Ewha WU   Spring 2020, Fall 2021, Spring 2022
Alumni Scholarship, Ewha WU   Spring 2020
Dean's List, seven semesters, Ewha WU   2019 – 2022

Awards

Fourth Place in Capstone Design Project Poster Session, Ewha WU   Jun. 2022
Third Place in Engineering Capstone Design Contest, Ewha WU   Dec. 2021
Third Place in Smart Farm & AI Challenge, Korea Ministry of Agriculture, Food and Rural Affairs   Nov. 2021
Second Place in Software Entrepreneur Contest, Ewha WU   Nov. 2021

TECHNICAL SKILLS

Proficient	C, Python (with PyTorch, TensorFlow), JavaScript (JS), Docker, MATLAB, LaTeX
Intermediate	MySQL, JAVA, C#
Basic	Assembly Language (MIPS), Android Studio