

HOJEONG LEE

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EDUCATION

University of Wisconsin–Madison	Sep 2025 - Present
Ph.D. in Computer Sciences	Madison, WI, USA
Korea University	Mar 2022 - Aug 2025
M.S. in Computer Science and Engineering	Seoul, Korea
Korea University	Mar 2016 - Feb 2022
B.E. in Computer Science and Engineering	Seoul, Korea

EXPERIENCE

WiNGS Lab, University of Wisconsin–Madison	Sep 2025 - Present
Research Assistant, advised by Prof. Suman Banerjee	Madison, WI, USA
Wireless Data Communications Lab, Korea University	Mar 2022 - Aug 2025
Research Assistant, advised by Prof. Hyogon Kim	Seoul, Korea
Internet Systems Lab, University of Colorado Boulder	Mar 2024 - Mar 2025
Visiting Scholar, advised by Prof. Sangtae Ha and Prof. Seyeon Kim	Boulder, CO, USA
Fully funded by Korea University	
Carnegie Mellon University	Aug 2022 - Feb 2023
Collaborating Visitor, AI-Related Project-Focused Intensive Program	Pittsburgh, PA, USA
Selected on merit-basis in national competition process	
Fully funded by the Korean Government	
Wireless Data Communications Lab, Korea University	Jun 2021 - Feb 2022
Undergraduate Research Intern, advised by Prof. Hyogon Kim	Seoul, Korea

RESEARCH INTERESTS

Network Systems	
Volumetric video streaming [14], 3D Gaussian splatting, augmented reality, virtual reality, (live) video streaming	
Skills: Python, C++, Open3D, Draco, PCL, FFmpeg, Intel Realsense SDK	
Wireless Networks	
LTE, 5G, 6G, vehicle-to-everything (V2X) communications [1-3, 5, 7-13], satellite communications [6]	
Skills: 3GPP & SAE standards, Matlab (LTEV2Vsim), Python, C++	
Artificial Intelligence	
Deep learning [1, 2, 4, 5], reinforcement learning [8, 11]	
Skills: Python, PyTorch, TensorFlow, CUDA, Docker, NumPy	

PUBLICATIONS

14. **Hojeong Lee**, Yu Hong Kim, Sangwoo Ryu, James Won-Ki Hong, Sangtae Ha, and Seyeon Kim. DeltaStream: 2D-Inferred Delta Encoding for Live Volumetric Video Streaming. ACM MobiSys, Anaheim, California, USA, 2025.
13. **Hojeong Lee**, Seungmo Kang, and Hyogon Kim. Causality-sensitive scheduling to reduce latency in vehicle-to-vehicle interactions. Sensors, 24 (22), 2024.
12. Seungmo Kang, **Hojeong Lee**, and Hyogon Kim. Mitigating Latency Inflation in V2C Transactions Using Periodic Sidelink Communication. IEEE VNC, Kobe, Japan, 2024.

11. **Hojeong Lee**, Chanwoo Kim, Eugene Yang, and Hyogon Kim. Distributed Joint Congestion Control for V2X Using Multi-agent Reinforcement Learning. IEEE ICMLCN, Stockholm, Sweden, 2024.
10. **Hojeong Lee** and Hyogon Kim. Improving One-Shot Transmission in NR Sidelink Resource Allocation for V2X Communication. arXiv preprint arXiv:2312.15914, 2023.
9. **Hojeong Lee** and Hyogon Kim. Rethinking Transmit Power Control for SAE J3161/1 Congestion Control Algorithm. IEEE VTC2023-Fall, Hong Kong, 2023.
8. Yeomyung Yoon, **Hojeong Lee**, and Hyogon Kim. Deep reinforcement learning-based dual-mode congestion control for cellular V2X environments. Electronics Letters, 59 (20), 2023.
7. Kyeongnam Park, **Hojeong Lee**, and Hyogon Kim. Speed-Aware V2X Congestion Control. IEEE VTC2023-Fall, Hong Kong, 2023.
6. Kyeongnam Park, Kyungha Kim, Hyungjoon Shin, **Hojeong Lee**, and Hyogon Kim. Strategically Positioning On-Board PEPs in LEO-based NTN for TCP Throughput Improvement. IEEE VTC2023-Fall, Hong Kong, 2023.
5. Hyeonji Seon, **Hojeong Lee**, and Hyogon Kim. Predicting CAM generation times through machine learning for cellular V2X communication. ICT Express, 9 (5), 2023.
4. Joseph Konan, Ojas Bhargave, Shikhar Agnihotri, **Hojeong Lee**, Ankit Shah, Shuo Han, Yunyang Zeng, Amanda Shu, Haohui Liu, Xuankai Chang, Hamza Khalid, Minseon Gwak, Kawon Lee, Minjeong Kim, and Bhiksha Raj. Improving Perceptual Quality, Intelligibility, and Acoustics on VoIP Platforms. arXiv preprint arXiv:2303.09048, 2023.
3. Hyeongji Seon, **Hojeong Lee**, and Hyogon Kim. Packet Delivery Impact of Predictive Resource Allocation for Quasi-Periodic Cellular V2X Communication. IEEE VTC2023-Spring, Florence, Italy, 2023.
2. Jonghwan Na, **Hojeong Lee**, and Hyogon Kim. Inferring Human Driver Intent in Partial Deployment of Connected Autonomous Vehicles: the Lane Change Case. IEEE VTC2023-Spring, Florence, Italy, 2023.
1. Hyeonji Seon, **Hojeong Lee**, and Hyogon Kim. Prediction of vehicle dynamics-based aperiodic message generation times in cellular V2X communication. Annual Conference of KIPS, Seoul, Korea, 2022. **OUTSTANDING PAPER AWARD**

AWARDS & GRANTS

Teaching Assistant, University of Wisconsin–Madison

Introduction to Computer Networks, Spring 2026
Foundations of Mobile Systems and Applications, Fall 2025

Scholarships for Internationalization, Korea University

Fall 2024

Conference Student Travel Grants

IEEE ICMLCN 2024, IEEE VTC2023-Fall

Research Assistant, Korea University

Fall 2023

Teaching Assistant, Korea University

Internet Protocol, Spring 2023
Computer Network, Spring 2022

Department Merit Based Scholarship, Korea University

Fall 2021, Spring 2021, Fall 2020

Korean Government Scholarship

Fall 2021, Spring 2021, Fall 2020, Fall 2016

EXTRACURRICULAR ACTIVITIES

Volunteer, ACM IMC 2025	Oct 2025
Coach, NAVER Corporation	Jan 2021 - Aug 2021
Boost Course PY4E (Python programming) and Harvard CS50	
Selected as an excellent coach in PY4E	
Software Education Volunteer, Korea University	Aug 2020 - Dec 2020
Software camp instructor and mentor for middle and high school students	
Software-related educational video production and Arduino project coaching	
Military Service, Republic of Korea Army	Jul 2018 - Mar 2020
Division Commander's Award, 3rd Place, division combat mission-focused physical training competition	
Overwatch Professional Gamer, Team LW Red	Jan 2017 - Dec 2017
Runner-up, Overwatch National University Tournament Season 2	Sep 2017
Winner, Overwatch APEX Challengers Season 4	Jul 2017