

Jeho Lee

Ph.D. Candidate (expected graduation: Dec 2026)
Department of Computer Science and Engineering, Yonsei University
Seoul, Republic of Korea

🏠 [jeho-lee.github.io](https://github.com/jeho-lee) [in linkedin.com/in/jeho-lee](https://www.linkedin.com/in/jeho-lee) ✉ jeholee@yonsei.ac.kr

RESEARCH INTERESTS

- On-Device AI
- Mobile and Embedded Systems

EDUCATION

Yonsei University, Seoul, Korea Ph.D. Student in Computer Science (Advisor: Hojung Cha)	Mar 2020 – Present
Ajou University, Suwon, Korea B.S. in Computer Engineering	Mar 2015 – Feb 2020 GPA: 4.0/4.5

PUBLICATIONS

Conference and Journal Publications (*Co-first authors)

6. ARIA: Optimizing Vision Foundation Model Inference on Heterogeneous Mobile Processors for Augmented Reality
Jeho Lee*, Chanyoung Jung*, Gunjoong Kim, Jiwon Kim, Seonghoon Park, Hojung Cha
ACM International Conference on Mobile Systems, Applications and Services (MobiSys 2025)
5. Panopticus: Omnidirectional 3D Object Detection on Resource-constrained Edge Devices
Jeho Lee, Chanyoung Jung, Jiwon Kim, Hojung Cha
ACM International Conference on Mobile Computing and Networking (MobiCom 2024)
4. Vulture: Cross-Device Web Experience with Fine-Grained Graphical User Interface Distribution
Seonghoon Park, **Jeho Lee**, Yonghun Choi, Hojung Cha
IEEE Conference on Computer Communications (INFOCOM 2024)
3. OmniLive: Super-Resolution Enhanced 360° Video Live Streaming for Mobile Devices
Seonghoon Park, Yeonwoo Cho, Hyungchol Jun, **Jeho Lee**, Hojung Cha
ACM International Conference on Mobile Systems, Applications and Services (MobiSys 2023)
2. Crow API: Cross-device I/O Sharing in Web Applications
Seonghoon Park, **Jeho Lee**, Hojung Cha
IEEE Conference on Computer Communications (INFOCOM 2023)
1. MAUI: Enhancing Assistive Web Interaction through GUI Abstraction
Jeho Lee, Seonghoon Park, Yoonha Cha, Hojung Cha
Under Review, IEEE Transactions on Human-Machine Systems (THMS)

Other Publications

2. Towards Accurate, Adaptive, and Real-time Machine Perception on Resource-constrained Platforms
Jeho Lee
ACM International Conference on Mobile Systems, Applications and Services (MobiSys 2025 Rising Star)
1. Poster: Mixture of Class-aware Experts for Efficient AIoT Inference
Hyemin Jeong, **Jeho Lee**, Seunghyeok Jeon, Hojung Cha
ACM International Conference on Mobile Systems, Applications and Services (MobiSys 2025 Poster)

PROJECTS

Development of On-device DNN Inference System for Real-time 3D Perception with Mobile 360-degree Camera

National Research Foundation of Korea (NRF)

May 2024 – Present

- Designed a BEV (bird's-eye-view) 3D object detection system that dynamically selects optimal inference paths per camera view, achieving $2.1\times$ latency reduction and 62% higher accuracy under 33 ms real-time constraints on NVIDIA Jetson devices, implemented with PyTorch, TensorRT, and CUDA (MobiCom '24)
- Built a mobile 3D perception testbed with 360-degree camera, LiDAR, and IMU sensors; created a nuScenes-compatible dataset across urban scenes, including sensor synchronization, calibration, and annotation: github.com/jeho-lee/Panoptic3D
- Initiated and led a project on real-time 3D perception for mobile/edge platforms; secured \$540 K in national funding by designing a 3-year research plan and leading a 10-person team from proposal to publication

Task Relation Graph Prediction based on RNN

Samsung Electronics, Republic of Korea

Mar 2023 – Feb 2024

EXPERIENCE

CSIRO, Pulenvale, Australia

Summer 2019

Undergraduate Research Intern – Data61 Robotics and Autonomous Systems Group

- Developed a real-time fish detection system using TensorFlow to monitor coral trout in fish tanks
- Trained and evaluated Faster R-CNN and SSD MobileNet models on a custom-labeled dataset; optimized configurations to reduce overfitting and improve mAP

SKILLS

Programming: Python, C/C++, Java, JavaScript

Languages: English (Professional Working), Korean (Native)

Frameworks: Android, Qualcomm Neural Processing SDK (QNN), TensorRT, PyTorch, TensorFlow, MMDetection3D, ROS, Node.js

AWARDS AND HONORS

SIGMOBILE Student Travel Grant, ACM MobiSys 2025

Rising Star, ACM MobiSys 2025

TEACHING EXPERIENCE

Guest Lecturer, Yonsei University

Spring 2024

On-Device Intelligence for 3D Perception: Challenges and Innovations

Teaching Assistant, Yonsei University

Spring 2023

Operating Systems (CSI3101)

Teaching Assistant, Yonsei University

Fall 2022

Introduction to Computer Science (CSI2106)

MENTORING EXPERIENCE

Hyemin Jeong, Master student at Yonsei Univ., a MobiSys 2025 poster

2025 – Present

Gunjoong Kim, Master student at Yonsei Univ., a MobiSys 2025 paper

2024 – Present

Chanyoung Jung, Master student at Yonsei Univ., a MobiSys 2025 paper

2024 – Present

Chanyoung Jung, Undergraduate student at Yonsei Univ., a MobiCom 2024 paper

2022 – 2023

Software Capstone Design, Yonsei Univ.

Spring 2021, Fall 2021, Spring 2022, Spring 2023, Fall 2023

