

# Jongwoo Lee

<https://github.com/sanngu5>

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## RESEARCH INTEREST

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My main research interest is generative AI and computer vision. I am particularly focused on **Few-shot Image Generation and Editing** for data augmentation.

Additionally, I worked on **privacy-preserving image camera pose estimation** in my master course period.

- **Image Generation:** Few-shot Image Generation and Editing for data augmentation (2025 - present)
- **Visual Localization:** Privacy-preserving representations of map and image query (2023 - 2024)

## EDUCATION

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- **[Hanyang University]** Seoul, South Korea  
*[Integrated MS-phD] Department of Artificial Intelligence* *Mar. 2023 -*
  - **[Spatial AI Lab]**
- **[Konkuk University]** Seoul, South Korea  
*[B.S.] Department of Computer Engineering, College of Engineering* *Mar. 2016 - Feb. 2023*
  - GPA: 3.98 / 4.5

## PAPERS

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### International paper

- **Depth-Guided Privacy-Preserving Visual 002 003 Localization Using 3D Sphere Clouds,**  
Heejoon Moon, Jongwoo Lee, Je Hyeong Hong<sup>†</sup>  
The 32nd British Machine Vision Conference (BMVC), 2024

### Domestic paper

- **Density-based Feature Point Revealing in 2D Uniform Line Queries for Privacy-Preserving Visual Localization**  
Jongwoo Lee, Je Hyeong Hong<sup>†</sup>  
36th Workshop on Image Processing and Image Understanding (IPIU), 2024

## PATENTS

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### Domestic patents

- **Visual Localization Method of Using Depth Information And Apparatus For Executing The Same**  
KR-Application No. 10-2025-0340969-57
- **Visual Localization Method of Preventing Personal Information Leakage And Apparatus For Executing The Same**  
KR-Application No. 10-2024-0190072-54

## SKILLS

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- **Programming** - Python, C++
- **Frameworks** - PyTorch, Tensorflow
- **Language** - TOEIC: 870

## OTHER EXPERIENCE

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### Oral Presentation

- **Adversarial Feature Learning is Not Enough for Privacy-Preserving Visual Localization,**  
Hanyang University - Beijing University of Posts and Telecommunications (HYU-BUPT) Joint Workshop, 2024

### Research Projects

- **Development of Generative AI Algorithm for Scarce Data Augmentation** 2025 - Present  
*Hyundai Motor Company*
- **Privacy-Preserving 3D Reconstruction and Camera Localization** 2023 - 2024  
*National Research Foundation of Korea (NRF)*

### Teaching

- **Hyundai Motor-KIA Company Manufacturing AI Research Lab Bootcamp**  
Teaching Assistant, 2025
- **3D Computer Vision & Introduction to Artificial Intelligence**  
Teaching Assistant, 2025
- **Optimization Methods for Artificial Intelligence & Introduction to Computer Vision,**  
Teaching Assistant, 2023

## AWARDS AND HONORS

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- **[Dean's List]** Feb. 2023  
*Konkuk University, Seoul, South Korea*