

# Seungjae Kim

M.S. Candidate

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## Research Interests

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### Video Understanding

*Multi-Object Tracking, Motion Prediction*

### 3D Perception

*3D Object Detection, BEV Representation, Point Cloud Processing*

### Novel View Synthesis

*Neural Radiance Fields, 3D Gaussian Splatting*

## Education

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### KyungHee University

*M.S. in Software Convergence (Advised by Prof. Myeong-Ah Cho)*

Gyeonggi, Korea

*Sep. 2025 – Aug. 2027 (Expected)*

### Hanshin University

*B.S. in Information and Communication Engineering*

Gyeonggi, Korea

*Mar. 2019 – Aug. 2025*

- 2-Year Military Service (2020-2021)

## Work Experience

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### Undergraduate Intern

*Visual Science Lab, KyungHee univ. (Advised by Prof. Myeong-Ah Cho)*

Gyeonggi, Korea

*Jul. 2024 – Aug. 2025*

## Projects

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### Development of a Multi-modal Alignment-based 3D Perception Foundation Model for Autonomous Driving

National IT Industry Promotion Agency (NIPA)

*Sep. 2025 – Dec. 2025*

- Deep Learning Researcher
- 3D Object Detection, LiDAR&RGB Fusion

### Development of AGI platform for multisensory social robot

Institute for Information Communications Technology Promotion (IITP)

*Apr. 2025 –*

- Deep Learning Researcher
- Few-shot Object Detection, Cross-domain Adaptation

### Anomaly pre-detection and response for intelligent surveillance system: high-level interpretation and response based on the visual-language fusion

National Research Foundation of Korea (NRF)

*Sep. 2024 –*

- Deep Learning Researcher

## Publications

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### International Conference

[1] **Seungjae Kim**<sup>\*</sup>, SeungJoon Lee, MyeongAh Cho, “PlugTrack: Multi-Perceptive Motion Analysis for Adaptive Fusion in Multi-Object Tracking,” *The Association for the Advancement of Artificial Intelligence (AAAI)*, 2026.

### Domestic Conference

[1] **Seungjae Kim**<sup>\*</sup>, Taeyoung Kim, YongHyun Gwon, MyeongAh Cho, “Efficient 3D Gaussian Splatting with Adaptive Depth Refinement in High-Confidence Regions,” *Korea Software Congress (KSC)*, 2025.

[2] MyoungChul Kim<sup>\*</sup>, **Seungjae Kim**, Suyeon Kim, MyeongAh Cho, “Explainable Intelligent Surveillance Video System using Spatial Localization,” *Korea Software Congress (KSC)*, 2025.

[3] SeungJoon Lee<sup>\*</sup>, Taeyoung Kim, **Seungjae Kim**, MyeongAh Cho, “BEV Segmentation Prior-Guided Class-Wise Attention for 3D Object Detection in Autonomous Driving,” *Korea Software Congress (KSC)*, 2025.

[4] **Seungjae Kim**<sup>\*</sup>, Useok Choi, Hayoung Lee, MyeongAh Cho, “Future-Aware Nonlinear Prediction Module for Real-Time Multi-Object Tracking,” *Korea Computer Congress (KCC)*, 2025.

[5] Useok Choi<sup>\*</sup>, **Seungjae Kim**, Chanse Oh, MyeongAh Cho, “Improving Latent Space in Consistency Distillation via Self-Generated Targets,” *Korea Computer Congress (KCC)*, 2025.

[6] Junhee Lee<sup>\*</sup>, **Seungjae Kim**, Seungjae Choi, Wongyu Lee, MyeongAh Cho, “Analysis of Key Conditions for Generalizable Generated Video Detection,” *Korea Software Congress (KSC)*, 2024.

### REFERENCE

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**Prof. Myeong-Ah Cho**, Professor, KyungHee

Relationship: M.S. advisor

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