Junho Park

Mail LinkedIn Homepage Scholar GitHub

Research Interest

My research focuses on enabling robots to perceive, reason, and act in human-centered environments. In particular, I study egocentric vision and hand-object interactions in 3D space to build perception systems that can bridge human understanding and robotic manipulation. By developing generative and learning-based models, I aim to provide robots with the ability to anticipate human actions and collaborate seamlessly in daily environments.

Education

Sogang University, South Korea Feb. 2024
M.S., Electronic Engineering – Advisor: Prof. Suk-Ju Kang
- Thesis: 3D Hand Dataset Generation Framework with Pose-guided Text-to-Image Diffusion Model

Sogang University, South Korea Feb. 2022
B.S., Mathematics and Electronic Engineering (Double Major)

Research Experience

VGG, University of Oxford, United Kingdom & KAIST, South Korea | *Collaboration* Oct. 2024 – Present
- Collaborated with *Ph. D. Taein Kwon* to develop a novel framework leveraging rich exocentric observations to translate views
- Co-authored 2 papers – 1 NeurIPS 2025 (under review), 1 ICCV 2025 Workshop

AI Lab, LG Electronics, South Korea | *AI Researcher* Mar. 2024 – Present
- Led by *Ph. D. Jaechul Kim*, developing **Vision Foundation Model (VFM)** which can simultaneously do **Object Detection, Panoptic Segmentation, Depth Estimation, Pose Estimation, Face Recognition, and Person Re-Identification** with world-best performance for **On-Device** – introduced in **CES 2025**.
- Constructing diffusion model-based **Large-Scale Generative Datasets** for robust recognition in in-the-wild scenes
- Co-authored 1 paper – 1 AAAI 2026 (under review)

Pusan National University, South Korea | *Collaboration* Jul. 2023 – Feb. 2025
- Collaborated with *Prof. Kyeongbo Kong* to develop generative models (e.g. Diffusion Models and Large Language Models) for in-the-wild 3D hand and room reconstruction
- Co-authored 4 papers – 1 ECCV 2024 Oral, 1 ECCV 2024 Workshop, 1 ICCV 2023 Workshop, 1 IEEE TMM

Samsung Electronics, South Korea | *Collaboration* Mar. 2023 – Feb. 2024
- Collaborated with *Computational Science & Engineering Team* to develop a full pipeline that removes noisy variant and regresses structural lengths from SEM images
- Co-authored 1 paper – 1 IEEE TIM

Korea Electronics Technology Institute (KETI), South Korea | *Collaboration* Mar. 2022 – Feb. 2023
- Collaborated with *Data Fusion Platform Research Center* to develop to develop a calibration-free algorithm suitable for public spaces, enabling use by general users
- Co-authored 1 paper – 1 IEEE Access

Sogang University, South Korea | *Master Student* Mar. 2022 – Feb. 2024
- Advised by *Prof. Suk-Ju Kang*, working on **Diffusion Models, Large Language Models, Egocentric Vision, Hand-Object Interaction, Pose/Gaze Estimation, Image Restoration, and Machine Learning**
- Co-authored 9 papers – 1 WACV 2026 (under review), 1 ICCV 2025 Workshop, 1 ECCV 2024 Oral, 2 ECCV Workshop, 1 ICCV 2023 Workshop, 1 IEEE TMM, 1 IEEE TIM, 1 IEEE Access

Sogang University, South Korea | *Undergraduate Student* Jul. 2021 – Dec. 2021
- Advised by *Prof. Myoung-Wan Koo*, awarded 1st place in AI Grand Challenge [Press]

Publications

1. [**Under Review**] **Junho Park**, Andrew Sangwoo Ye, Taein Kwon†. EgoWorld: Translating Exocentric View to Egocentric View using Rich Exocentric Observations. [Project Page] [Paper]
2. [**Under Review**] **Junho Park***, Yeieun Hwang*, Suk-Ju Kang†. Describe Your Camera: Towards Implicit 3D-Aware Cross-View Translation for Hand-Object Interaction.
3. [**Under Review**] Jonghyun Kim, Yubin Yoon, Bo-Sang Kim, Hyoyoung Kim, **Junho Park**, Jungho Lee†, Jaechul Kim†. Single Query to Bind Them: Unified Representations for Efficient Human Pose Estimation.
4. [**ICCVW 2025**] Minsuh Song*, **Junho Park***, Suk-Ju Kang†. Replace-in-Ego: Text-Guided Object Replacement in Egocentric Hand-Object Interaction.
5. [**ICCVW 2025**] **Junho Park**, Andrew Sangwoo Ye, Taein Kwon†. Generating Egocentric View from Exocentric View via Multimodal Observations.
6. [**ECCV 2024**] **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. AttentionHand: Text-driven Controllable Hand Image Generation for 3D Hand Reconstruction in the Wild. **(Oral Presentation, Acceptance Rate: 2.3%)** [Project Page] [Paper]
7. [**ECCVW 2024**] Jihyun Kim*, **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. Interactive 3D Room Generation for Virtual Reality via Compositional Programming. **(Oral Presentation)** [Paper]
8. [**ECCVW 2024**] **Junho Park***, Yeieun Hwang*, Suk-Ju Kang†. Diffusion-based Interacting Hand Pose Transfer. [Paper]
9. [**ICCVW 2023**] **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. A Novel Framework for Generating In-the-Wild 3D Hand Datasets. [Paper]
10. [**IEEE TMM**] Jihyun Kim*, **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. Programmable-Room: Interactive Textured 3D Room Meshes Generation Empowered by Large Language Models. [Project Page] [Paper]
11. [**IEEE TIM**] **Junho Park**, Yubin Cho, Yeieun Hwang, Ami Ma, QHwan Kim, Kyu-Baik Chang, Jaehoon Jeong, Suk-Ju Kang†. Mixup-based Neural Network for Image Restoration and Structure Prediction from SEM Images. [Paper]
12. [**IEEE Access**] Joseph Kihoon Kim*, **Junho Park***, Yeon-Kug Moon†, Suk-Ju Kang†. Improving Gaze Tracking in Large Screens with Symmetric Gaze Angle Amplification and Optimization Technique. [Paper]

Academic Services

Conference Reviewer	ICCV (2025–), WACV (2026–)
Journal Reviewer	IEEE TII (2024–), TCSVT (2025–)

Skills

Languages	Strong reading, writing and speaking competencies for English and Korean
ML Frameworks	PyTorch, Huggingface, PyTorch Lightning, Tensorflow
Data Analytics	Numpy, Matplotlib, SciPy, Pandas, Seaborn
SW Engineering Tools	Python, Git-based workflow, CUDA, Shell, Linux, Docker, Slurm