Junho Park

Mail LinkedIn Homepage Scholar GitHub

Research Interest

My research focuses on **egocentric vision and 3D hand-object interaction** to enable robots to understand and collaborate with humans in daily environments. I develop **generative and learning-based models** that connect human perception with robotic manipulation, aiming to build systems capable of **anticipating human actions and supporting seamless human-robot collaboration**.

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 *Dr. Taein Kwon* – Developed a framework for translating exocentric observations to egocentric views, providing **Sim-to-Real Priors for Embodied Agents**
- Co-authored 2 papers – 1 ICLR 2026 (under review), 1 ICCV 2025 Workshop

AI Lab, LG Electronics, South Korea | *AI Researcher* Mar. 2024 – Present
- Led by *Dr. Jaechul Kim (VP)* – Contributed to a **Vision Foundation Model for On-Device & Robot Perception** (object detection, panoptic segmentation, depth estimation, pose estimation, and face recognition); showcased at CES 2025 and LG Tech Fair 2025
- Built **Large-Scale Generative Datasets** with diffusion models for robust recognition, relevant for **Robot Learning and Adaptation**
- Co-authored 1 paper – 1 CVPR 2026 (under review)

Pusan National University, South Korea | *Collaboration* Jul. 2023 – Feb. 2025
- Collaborated with *Prof. Kyeongbo Kong* – Worked on generative models (diffusion-based hand image generation and LLM-based 3D room generation), supporting **Robotic Interaction through Controllable 3D Assets**
- 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 *AI Center* – Designed a deep learning pipeline for SEM image restoration and structure prediction
- 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* – Developed a calibration-free gaze estimation algorithm suitable for public use
- Co-authored 1 paper – 1 IEEE Access

Sogang University, South Korea | *Master Student* Mar. 2022 – Feb. 2024
- Advised by *Prof. Suk-Ju Kang* – Focused on **Robotically Relevant Problems such as Pose/Gaze Estimation, Manipulation Priors, and Embodied Perception**
- Co-authored 9 papers – 1 IEEE TMM (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* – Developed a speech recognition system for identifying hazardous events in CCTV blind spots, enabling timely response and reinforcing public safety
- Awarded 1st place in AI Grand Challenge 2021

Publications

1. [**Preprint**] **Junho Park**, Andrew Sangwoo Ye, Taein Kwon†. EgoWorld: Translating Exocentric View to Egocentric View using Rich Exocentric Observations. (†: Corresponding Author.) [Project Page] [Paper]
2. [**ICCVW 2025**] Minsuh Song*, **Junho Park***, Suk-Ju Kang†. Replace-in-Ego: Text-Guided Object Replacement in Egocentric Hand-Object Interaction. (*: Equal Contribution, †: Corresponding Author.) [Paper]
3. [**ICCVW 2025**] **Junho Park**, Andrew Sangwoo Ye, Taein Kwon†. Generating Egocentric View from Exocentric View via Multimodal Observations. (†: Corresponding Author.) [Paper]
4. [**ECCV 2024**] **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. AttentionHand: Text-driven Controllable Hand Image Generation for 3D Hand Reconstruction in the Wild. (*: Equal Contribution, †: Corresponding Author.) [Project Page] [Paper] **(Oral Presentation, Acceptance Rate: 2.3%)**
5. [**ECCVW 2024**] Jihyun Kim*, **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. Interactive 3D Room Generation for Virtual Reality via Compositional Programming. (*: Equal Contribution, †: Corresponding Author.) [Paper] **(Oral Presentation)**
6. [**ECCVW 2024**] **Junho Park***, Yeieun Hwang*, Suk-Ju Kang†. Diffusion-based Interacting Hand Pose Transfer. (*: Equal Contribution, †: Corresponding Author.) [Paper]
7. [**ICCVW 2023**] **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. A Novel Framework for Generating In-the-Wild 3D Hand Datasets. (*: Equal Contribution, †: Corresponding Author.) [Paper]
8. [**IEEE TMM**] Jihyun Kim*, **Junho Park***, Kyeongbo Kong*, Suk-Ju Kang†. Programmable-Room: Interactive Textured 3D Room Meshes Generation Empowered by Large Language Models. (*: Equal Contribution, †: Corresponding Author.) [Project Page] [Paper]
9. [**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. (†: Corresponding Author.) [Paper]
10. [**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. (*: Equal Contribution, †: Corresponding Author.) [Paper]
11. [**Under Review**] **Junho Park***, Yeieun Hwang*, Suk-Ju Kang†. TransHOI: Implicit 3D-Aware Cross-View Translation for Hand-Object Interaction Generation. (*: Equal Contribution, †: Corresponding Author.)
12. [**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. (†: Corresponding Author.)

Academic Services

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

Honors & Awards

Ministry of Science and ICT	1st Place, AI Grand Challenge 2021 [Press]

Skills

Languages	English (fluent), Korean (native)
ML Frameworks	PyTorch, Huggingface, PyTorch Lightning, Tensorflow
Data Analytics	Numpy, Matplotlib, SciPy, Pandas, Seaborn
SW Engineering Tools	Python, C++, Git-based workflow, CUDA, Shell, Linux, Docker, Slurm