Curriculum Vitae

In-Pyo Song

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EDUCATION

B.S., Major in Mechanical Engineering, Korea Aerospace University (KAU), Go-yang, Rep. Korea, Feb. 2023 https://www.kau.ac.kr

PROFESSIONAL EXPERIENCE

Sungkyunkwan University (SKKU), Seoul, Rep. Korea http://www.skku.edu

Sep. 2023 - Current

M.S. Student, Department of Immersive Media Engineering

- Laboratory: Intelligent and Interactive Systems Lab
- GPA: 3.79 / 4.0

Indiana University Bloomington, Bloomington, IN, USA

Jun. 2024 - Aug. 2024

https://bloomington.iu.edu/

Research Intern, Computer Vision Lab (http://vision.soic.indiana.edu)

PUBLICATIONS

International Conference

- 1. **Inpyo Song**, Jangwon Lee, "REAL-TIME TRAFFIC ACCIDENT ANTICIPATION WITH FEATURE REUSE", IEEE International Conference on Image Processing (ICIP), Sep. 2025. [Accepted]
- 2. **Inpyo Song**, Hyemin Hwang, Jangwon Lee, "PAWPRINT: WHOSE FOOTPRINTS ARE THESE? IDENTIFYING ANIMAL INDIVIDUALS BY THEIR FOOTPRINTS", IEEE International Conference on Image Processing (ICIP), Sep. 2025. [Accepted]
- 3. **Inpyo Song**, Sanghyeon Lee, Minjun Joo, Jangwon Lee, "Anomaly Detection for People with Visual Impairments Using an Egocentric 360-Degree Camera", IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Feb. 2025.
- 4. **Inpyo Song**, Jangwon Lee, "SFTrack: A Robust Scale and Motion Adaptive Algorithm for Tracking Small and Fast Moving Objects", IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**), Oct. 2024. (Selected **Long Oral**)
- 5. **Inpyo Song**, Jongmin Lee, Moonwook Ryu, Jangwon Lee, "Motion-Aware Heatmap Regression for Human Pose Estimation in Videos", International Joint Conferences on Artificial Intelligence (IJCAI), Aug. 2024.
- 6. **Inpyo Song**, Minjun Joo, Joonhyung Kwon, Jangwon Lee, "Video Question Answering for People with Visual Impairments Using an Egocentric 360-Degree Camera", In IEEE Conference on Computer Vision and Pattern Recognition Workshop (CVPRW) on First Joint Egocentric Vision (EgoVis), Jun. 2024.
- 7. **Inpyo Song**, Jangwon Lee, "Scale and Motion Adaptive Multi-Object Tracking Algorithm for Unmanned Aerial Vehicles", IEEE International Conference on Robot & Human Interactive Communication (**RO-MAN**), Late-Breaking Reports, Aug. 2023.

International Journal

1. **Inpyo Song**, Moonwook Ryu, Jangwon Lee, "Action-Conditioned Contrastive Learning for 3D Human Pose and Shape Estimation in Videos", Computer Vision and Image Understanding (CVIU), Sep. 2024. (IF: 4.3, Q1(2023))

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Korean Domestic Conference

- 1. Jongmin Lee*, Inpyo Song* (Equal Contribution), Moonwook Ryu, Jangwon Lee, "Smooth and Consistent Pose Estimation with Intersections Module", The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 2024.
- 2. **Inpyo Song**, Jangwon Lee, "*Multi-task Learning in Facial Kinship Verification*", The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 2023.

Korean Domestic Journal

- 1. **Inpyo Song**, Jangwon Lee, "*Teacher Response Entropy Based Adaptive Knowledge Distillation*", Journal of Korean Institute of Intelligent Systems (KIIS), Dec. 2024.
- 2. **Inpyo Song**, Jangwon Lee, "Rule-based Zero-shot Video Anomaly Detection Using Object Detection and Semantic Segmentation", Journal of Broadcast Engineering (JBE), Vol. 29, No. 6, Nov. 2024.

PATENT

Korean Domestic Patent

- 1. Jangwon Lee, **Inpyo Song**, "Apparatus for Predicting Posture and Shape of 3D Human and Method Thereof", Research & Business Foundation of Sungkyunkwan University, No. 10-2024-0039467, Mar. 2024.
- 2. Jangwon Lee, **Inpyo Song**, Minjun Ju, Joonhyung Kwon, "*Apparatus for Detecting Abnormality and Method Thereof*", Research & Business Foundation of Sungkyunkwan University, No. 10-2024-0031055, Mar. 2024.
- 3. Jangwon Lee, Jongmin Lee, **Inpyo Song**, "Apparatus for Estimating Human Pose and Method Thereof", Research & Business Foundation of Sungkyunkwan University, No. 10-2023-0186741, Oct. 2023.

International Patent

- 1. Jangwon Lee, **Inpyo Song**, Minjun Joo, Junhyung Kwon, "*Apparatus for Detecting Abnormality and Method Thereof*", Research & Business Foundation of Sungkyunkwan University, No. 19/062,397, Feb. 2025.
- 2. Jangwon Lee, Jongmin Lee, **Inpyo Song**, "Apparatus for Estimating Human Posture and Method Thereof", Research & Business Foundation of Sungkyunkwan University, No. 18/979,379, Dec. 2024.

HONORS AND AWARDS

- Excellence Award, Jongmin Lee, Inpyo Song, Hannah Cho, "Multimodal VQA-Based Tutoring System for the Digital Transformation of Hands-On Education", SKKU Graduate Student Startup Competition, Oct. 2024.
- President's Award from IITP (Institute of Information & Communications Technology Planning & Evaluation), Jongmin Lee, Inpyo Song, "Motion-Aware Heatmap Regression for Human Pose Estimation in Videos", 2024 Digital Innovation Talent Symposium, Aug. 2024.
- Encouragement Award, Inpyo Song, "Technological Social Responsibility: Anomaly Detection for People with Visual Impairments Using an Egocentric 360-Degree Camera", SKKU Research Matters, Feb. 2024.
- **Grand Award**, Heetae Lee, **Inpyo Song**, Suho Jang, "Generating Digital Twin using Instance-NeRF", KAU Start-up Idea Competition, Dec. 2022.

RESEARCH INTEREST

Computer Vision: 2D/3D Human Pose Estimation, Anomaly Detection, Object Tracking, Autonomous Driving

Deep Learning: Knowledge Distillation Multi-Modal: Visual Question Answering

SERVICE

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International Conference

- 1. IEEE International Conference on Development and Learning (ICDL), 2024, Emergency Reviewer
- 2. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2025, Emergency Reviewer

REFERENCE

Jang-won Lee:

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David J. Crandall:

Luddy Professor (Tenured), Computer Science, Indiana University Bloomington

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