

# Curriculum Vitae

## Inpyo 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>

M.S., Immersive Media Engineering  
Sungkyunkwan University (SKKU), Seoul, Rep. Korea  
Sep. 2023 – Feb. 2026

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

Ph.D., Immersive Media Engineering  
Sungkyunkwan University (SKKU), Seoul, Rep. Korea  
Mar. 2026 – Present

- Intelligent and Interactive Systems Lab
- Advisor: Prof. Jangwon Lee

### PROFESSIONAL EXPERIENCE

Indiana University Bloomington, Bloomington, IN, USA  
<https://bloomington.iu.edu/>  
Research Intern, Computer Vision Lab (<http://vision.soic.indiana.edu>)  
Jun. 2024 – Aug. 2024

### PUBLICATIONS

#### International Conference Papers

1. **Inpyo Song**, Jangwon Lee, “*Bounding-Box Trajectories Matter for Video Anomaly*”, European Conference on Computer Vision (ECCV), 2026. [accepted]
2. **Inpyo Song**, Jangwon Lee, “*Real-Time Traffic Accident Anticipation with Feature Reuse*”, IEEE International Conference on Image Processing (ICIP), Sep. 2025.
3. **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.
4. **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.
5. **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. **(Long Oral)**
6. **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.
7. **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.
8. **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 Papers

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))

### Korean Conference Papers

1. **Inpyo Song**, Eunji Jeon, Jangwon Lee, “*Probing H.264 Compressed-Domain Signals for Video Anomaly Detection*”, The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 2026.
2. Moonwook Ryu, Jongwoo Choi, **Inpyo Song**, Jangwon Lee, “*A Study on Synthetic Data Generation and Evaluation for Pose Estimation in Surveillance Videos*”, The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 2026. (Outstanding Poster Award)
3. 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.
4. **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 Journal Papers

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.

## MANUSCRIPTS UNDER REVIEW

1. **Inpyo Song**, Eunji Jeon, Jangwon Lee, “PCEval: A Benchmark for Evaluating Physical Computing Capabilities of Large Language Models” (submitted)
2. **Inpyo Song**, Minjun Ju, Joonhyung Kwon, Eunji Jeon, Jangwon Lee, “Instance-Aligned Captions for Explainable Video Anomaly Detection” (submitted)

## PATENTS

### Korean Patent Applications

1. Jangwon Lee, **Inpyo Song**, “*Apparatus for Predicting Posture and Shape of 3D Human and Method Thereof*”, Research & Business Foundation of Sungkyunkwan University, Korean Patent Application 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, Korean Patent Application 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, Korean Patent Application No. 10-2023-0186741, Oct. 2023.

### International Patent Applications

1. Jangwon Lee, **Inpyo Song**, Minjun Joo, Junhyung Kwon, “*Apparatus for Detecting Abnormality and Method Thereof*”, Research & Business Foundation of Sungkyunkwan University, U.S. Patent Application 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, U.S. Patent Application No. 18/979,379, Dec. 2024.

## HONORS AND AWARDS

- **Outstanding Poster Award** (Poster Presenter), “*A Study on Synthetic Data Generation and Evaluation for Pose Estimation in Surveillance Videos*”, KIBME Summer Conference, Jun. 2026
- **Best Graduate Research Award**, **Inpyo Song**, “*Technological Social Responsibility: Anomaly Detection for People with Visual Impairments Using an Egocentric 360-Degree Camera*”, 2025 Digital Innovation Talent Symposium, Aug. 2025.

- **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 INTERESTS

Computer Vision : 2D/3D Human Pose Estimation, Anomaly Detection, Autonomous Driving  
Deep Learning : Knowledge Distillation  
Multi-Modal : Visual Question Answering

## SERVICE

### International Conference Service

1. Conference on Neural Information Processing Systems (NeurIPS), 2026, Reviewer
2. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026, Reviewer
3. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2026, Reviewer
4. Association for the Advancement of Artificial Intelligence (AAAI), 2026, Reviewer
5. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2025, Reviewer
6. IEEE International Conference on Development and Learning (ICDL), 2024, Reviewer

## REFERENCES

### Jang-won Lee :

Associate Professor, Department of Immersive Media Engineering, Sungkyunkwan University (SKKU)  
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### David J. Crandall :

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