

# Jaehwan Jeong

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## RESEARCH INTERESTS

Embodied AI, Robotic Learning, Autonomous Systems  
Multi-modal learning, Generative model, AI safety

## EDUCATION

- **Korea University** Mar. 2024 - Fe. 2029 (Expected)  
Ph.D. - Artificial Intelligence Seoul, South Korea
- **Chung-Ang University** Mar. 2017 - Fe. 2021  
B.E. - Electrical & Electronic Engineering Seoul, South Korea

## EXPERIENCE

- **Structures-Computer Interaction Lab @ University of California, Los Angeles (UCLA)** Mar. 2025 - Present  
Visiting Graduate Researcher; **3D Farm Project Lead** (Advisor: Prof. M. Khalid Jawed)
  - VLN & RL-driven safe autonomy for UGV via multi-sensor fusion (*in progress*)
  - Eye-in-Hand autonomous robotic arm manipulation - [J3]
  - Integrated UGV field robotics system deployment - [J2]
- **Computer Vision Lab @ Korea University** Mar. 2024 - Present  
Ph.D. Student Researcher (Advisor: Prof. Sangpil Kim)
  - Adversarial noise for Deepfake AI safety (*collaborated with Dr. Jaewook Chung @ Samsung Research*) - [C2]
  - Multi-modal audio-to-video generation (*collaborated with Dr. Eugenio Culurciello @ Purdue Univ.*) - [J1]
- **Computer Vision Lab @ Korea University** Jul. 2023 - Fe. 2024  
Undergraduate Research Intern (Advisor: Prof. Sangpil Kim)
  - Diffusion-based long video generation (*collaborated with Dr. Wonmin Byeon @ NVIDIA Research*) - [C1]
- **Military Officer** Mar. 2021 - Jun. 2023  
Signal Company, 5th Armored Brigade, Republic of Korea Army
  - Operations and Tactical Planner - 1st Lieutenant
  - Wired communication network management (UTP, Optical cables) - 2nd Lieutenant

## PUBLICATIONS

C=CONFERENCE, J=JOURNAL

- [J3] **Jaehwan Jeong\***, Tuan-Anh Vu\*, Radha Lahoti, Jiawen Wang, Vivek Alumootil, Sangpil Kim, M. Khalid Jawed, *Vision-Guided Targeted Grasping and Vibration for Robotic Pollination in Controlled Environments*, under review, 2025 [PDF] [Code]
- [J2] **Jaehwan Jeong**, Tuan-Anh Vu, Mohammad Jony, Shahab Ahmad, Md. Mukhlesur Rahman, Sangpil Kim, M. Khalid Jawed, *AgriChrono: A Multi-modal Dataset Capturing Crop Growth and Lighting Variability with a Field Robot*, under review, 2025 [PDF] [Project] [Code]
- [C2] **Jaehwan Jeong**, Sumin In, Sieun Kim, Shin han yi, Jonghen Jeong, Sang Ho Yoon, Jaewook Chung, Sangpil Kim, *FaceShield: Defending Facial Image against Deepfake Threats*, International Conference on Computer Vision (ICCV) 2025 [PDF] [Code]
- [J1] Sieun Kim, **Jaehwan Jeong**, Sumin In, Seung Hyun Lee, Seungryong Kim, Saerom Kim, Wooyeol Baek, Sang Ho Yoon, Eugenio Culurciello, Sangpil Kim, *Semantically Complex Audio to Video Generation with Audio Source Separation*, Engineering Applications of Artificial Intelligence (JCR IF Top 10%) 2025 [PDF] [Code]
- [C1] Gyeongrok Oh, **Jaehwan Jeong**, Sieun Kim, Wonmin Byeon, Jinkyu Kim, Sungwoong Kim, Sangpil Kim, *MEVG: Multi-event Video Generation with Text-to-Video Models*, European Conference on Computer Vision (ECCV) 2024 [PDF] [Code]

## ACADEMIC SERVICE

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- **Conference Reviewer**

IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2025, 2026

IEEE/CVF International Conference on Computer Vision (ICCV), 2025

The 29th International Conference on Developments in Language Theory (DLT), 2025

- **Journal Reviewer**

Computer Vision and Image Understanding (CVIU), 2025

Engineering Applications of Artificial Intelligence (EAAI), 2025, 2026

## PATENTS

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[P1] Jaehwan Jeong, Sangpil Kim, *Method and Apparatus for Protecting Facial Image based on Disturbance Signal to Counter Deepfake Attack*, Korean Patent, No. 10-2025-0118588 (2025.08.25)

## SKILLS

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- **AI & Perception**

Diffusion Models, VLN(A), Adversarial Attack,  
Reinforcement Learning, 3D Reconstruction

- **Robotics & Sensor Fusion**

Unmanned Ground Vehicle (UGV), Robotic Arms,  
ROS 2, RGB-D Cameras, LiDAR, GNSS, IMU

## REFERENCES

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- **Asst. Prof. Sangpil Kim**

Department of Artificial Intelligence, Korea University, South Korea

- **Assoc. Prof. M. Khalid Jawed**

Department of Mechanical and Aerospace Engineering, University of California, Los Angeles

- **Postdoc. Tuan-Anh Vu**

Department of Mechanical and Aerospace Engineering, University of California, Los Angeles