Jaewoo Jeong

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Vocational Timeline

23.03 – **Korea Advanced Institute of Science and Technology**,
Doctoral Candidate in Mechanical Engineering.
Advisor: Prof. Kuk-Jin Yoon

21.03 – 23.02 **Korea Advanced Institute of Science and Technology**,
Masters of Science in Mechanical Engineering, GPA – 4.01/4.30.
Advisor: Prof. Jungchul Lee
Thesis: Computer vision-based analysis for high temperature annealing and dropwise condensation

19.05 – 20.12 **KATUSA, Republic of Korea Army**
-Served the Korean army for 19 months as a mandatory service

15.09 – 18.12 **University of Minnesota-Twin Cities**,
Bachelor of Mechanical Engineering, GPA – 3.75/4.00
Dean's list: 2015 Fall, 2016 Spring, 2017 Spring, 2017 Fall, 2018 Spring.

Research Area

◆ Motion Prediction and Planning
◆ Multi-modal LLM

Publications (Motion prediction / planning)

ICCV 2025
★ Highlight Interaction-Merged Motion Planning: Effectively Leveraging Diverse Motion Datasets for Robust Planning
G. Lee*, W. Jeong*, D. Park, **J. Jeong**, K. Yoon
* denotes equal contribution

IROS 2025 Non-differentiable Reward Optimization for Diffusion-based Autonomous Motion Planning
G. Lee*, D. Park*, **J. Jeong***, K. Yoon
* denotes equal contribution

CVPR 2025 Multi-modal Knowledge Distillation-based Human Trajectory Forecasting / Code
J. Jeong, S. Lee, D. Park, G. Lee, K. Yoon

CVPR 2024
★ Highlight Multi-agent Long-term 3D Human Pose Forecasting via Interaction-aware Trajectory Conditioning / Code, Project Page
J. Jeong*, D. Park*, K. Yoon
* denotes equal contribution

CVPR 2024	T4P: Test-Time Training of Trajectory Prediction via Masked Autoencoder and Actor-specific Token Memory / Code D. Park, J. Jeong, S. Yoon, **J. Jeong**, K. Yoon
AAAI 2024	Improving Transferability for Cross-domain Trajectory Prediction via Neural Stochastic Differential Equation / Code D. Park, **J. Jeong**, K. Yoon

Publications (Computer vision for manufacturing)

2026	Analysis of Multiscale Condensation Phenomena Using a Zero-Shot Computer Vision Framework D. Lee, S. Roh, **J. Jeong**, K. Yoon, J. Lee, and Y. Nam ***Advanced Science***
2023	Near-infrared inspection and machine learning-based prediction for semiconductor membrane cavity structures M. G. Jeong, **J. Jeong**, T. Kim, B. J. Lee and J. Lee ***IEEE-Nano/Micro Engineered and Molecular Systems***
2022	Predicting AFM topography from optical microscopes using deep-learning **J. Jeong**, T. Kim, B. J. Lee, J. Lee. ***Advanced Intelligent Systems*** - Selected as inside back cover - Featured in multiple medias, including YTN Science Today
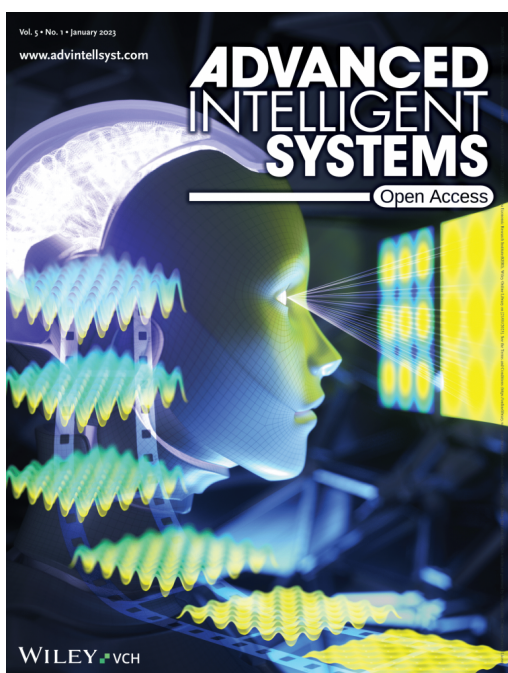
2022	Simulation of Germanium-on-Nothing cavity's morphological transformation using deep learning **J. Jeong**, T. Kim, J. Lee. ***Micro and Nano Systems Letters***

2022   PCA-based sub-surface structure and defect analysis for Germanium-on-Nothing using nanoscale surface topography
J. Jeong, T. Kim, B. J. Lee, J. Lee.
Scientific Reports

2021   Cellular and biomolecular detection based on suspended microchannel resonators
J. Ko, **J. Jeong,**, S. Son, J. Lee.
Biomedical Engineering Letters

2018   3D Printed Polymer Photodetectors
S.H. Park, R. Su, **J. Jeong**, S. Z. Guo K. Qiu, D. Joung, F. Meng, M. C. McAlpine.
Advanced Materials

Awards

25.11   **Finalist**, *Qualcomm Innovation Fellowship Korea*.
-Interaction-Merged Motion Planning: Effectively Leveraging Diverse Motion Datasets for Robust Planning

24.12   **Awardee**, *Qualcomm Innovation Fellowship Korea*.
-Multi-agent Long-term 3D Human Pose Forecasting via Interaction-aware Trajectory Conditioning

22.06   **1st place**, *KAIST-UNIST quantitative investment competition*.
-Slim timeframe momentum investing with statistical augmentation / Code

21.11   **Outstanding paper award**, *Micro Nano Systems Conference*.
J. Jeong, T. Kim, B. J. Lee, J. Lee

21.11   **Bronze Award**, *KSME-SEMES Open Innovation Challenge*.
J. Lee, M. G. Jeong, T. Kim, **J. Jeong**, B. J. Lee

17.06 – 17.08   **UROP Scholarship**, *University of Minnesota*, Advisor: Prof. Michael McAlpine.
-3D printing polymer photodetectors

15.09 – 18.12   **Global Maroon Scholarship**, *University of Minnesota*.

Teaching Experience

25.3   **Teaching Assistant, ME 40059: Introduction to Computer Vision**
Dept. of Mechanical Engineering, KAIST

22.1, 23.1   **Teaching Assistant, Korean Camp**
School of Digital Humanities and Computational Social Sciences, KAIST

Academic Service

Reviewer
2024: IEEE Internet of Things Journal
2025: ICCV, IROS, NeurIPS, TPAMI
2026: AAAI, CVPR

Skills

Programming Languages
C, C++, Python

Deep Learning Frameworks
PyTorch

Languages
Korean (Native), English (Native)

Extracurricular Activities

22.3 – 22.12 Vocalist, HUG @ KAIST

16.09 – 17.09 Vocalist, Sentimental Sounds @ UMNTC

15.12 – 18.12 Captain, FC Green @ UMNTC

15.09 – 16.12 Board Member, Korean-American Scientists and Engineers Association (KSEA) @ UMNTC