Daehee Park

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Department of Electrical Engineering and Computer Science
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Research Interests

- **Multi-modal learning**: Multi-modal deep learning integrating visual, linguistic, and motion information.
- **AI-driven decision making**: Models integrating perception, prediction, and planning for autonomous decisions.
- **Computer vision**: Detection, tracking, and segmentation for autonomous systems.

Work Experience

- **DGIST** 2025.03 – Present
  Assistant Professor, Daegu, Korea
- **Qualcomm** 2024.04 – 2024.09
  Deep Learning R&D Intern, San Diego (Remote), US
- **Naver Labs** 2021.06 – 2021.08
  Research Intern, Seongnam, Korea

Education

- **KAIST**, Daejeon, Korea 2020.03 – 2025.02
  Ph.D. in Mechanical Engineering
  Thesis: *Data-driven Trajectory Prediction for Reliable Autonomous Driving Systems*
  Advisor: Kuk-Jin Yoon
- **KAIST**, Daejeon, Korea 2018.03 – 2020.02
  M.S. in Mechanical Engineering
  Thesis: *Removal of Reflected Virtual Images in Visual Recognition Utilizing 3D Depth Information*
- **KAIST**, Daejeon, Korea 2013.03 – 2018.02
  B.S. in Mechanical Engineering
  Double Major in Business and Technology Management

Publications

- **[c13]** Generative Active Learning for Long-tail Trajectory Prediction via Controllable Diffusion Model.
  Daehee Park, Monu Surana, Pranav Desai, Ashish Mehta, Reuben M. V. John, Kuk-Jin Yoon.
  IEEE/CVF International Conference on Computer Vision (ICCV), 2025.
- **[c12]** Interaction-Merged Motion Planning: Effectively Leveraging Diverse Motion Datasets for Robust Planning.
  Giwon Lee*, Wooseong Jeong*, **Daehee Park**, Jaewoo Jeong, Kuk-Jin Yoon.
  IEEE/CVF International Conference on Computer Vision (ICCV), 2025. (Highlight)
- **[c11]** Denoising Diffusion Policy Optimization for Diffusion-based Motion Planning.
  Giwon Lee*, **Daehee Park***, Jaewoo Jeong*, Kuk-Jin Yoon.
  IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2025.
- **[p1]** Self-Supervised 3D Occupancy Prediction with Temporal Consistency.
  Jae-Seok Jeong, Sung-Hoon Yoon, **Daehee Park**, Kuk-Jin Yoon.
  arXiv preprint, 2025.
- **[c10]** Multi-modal Knowledge Distillation-based Human Trajectory Forecasting.
  Jaewoo Jeong, SeoHee Lee, **Daehee Park**, Giwon Lee, Kuk-Jin Yoon.
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2025.

- **[c9]** Diffusion-Guided Weakly Supervised Semantic Segmentation.
  Sung-Hoon Yoon, Hoyong Kwon*, Jaeseok Jeong*, **Daehee Park**, Kuk-Jin Yoon.
  European Conference on Computer Vision (ECCV), 2024.

- **[c8]** T4P: Test-Time Training of Trajectory Prediction via Masked Autoencoder and Actor-specific Token Memory.
  Daehee Park, Jae-Seok Jeong, Sung-Hoon Yoon, Jaewoo Jeong, Kuk-Jin Yoon.
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024.

- **[c7]** Multi-agent Long-term 3D Human Pose Forecasting via Interaction-aware Trajectory Conditioning.
  Jaewoo Jeong*, **Daehee Park***, Kuk-Jin Yoon.
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024. (Highlight)

- **[c6]** Improving Transferability for Cross-domain Trajectory Prediction via Neural Stochastic Differential Equation.
  Daehee Park, Jaewoo Jeong, Kuk-Jin Yoon.
  AAAI Conference on Artificial Intelligence (AAAI), 2024.

- **[c5]** Leveraging Future Relationship Reasoning for Vehicle Trajectory Prediction.
  Daehee Park, Hobin Ryu, Yunseo Yang, Jegyeong Cho, Jiwon Kim, Kuk-Jin Yoon.
  International Conference on Learning Representations (ICLR), 2023.

- **[c4]** BIPS: Bi-modal Indoor Panorama Synthesis via Residual Depth-Aided Adversarial Learning.
  Changgyoon Oh*, Wonjune Cho*, Yujeong Chae*, **Daehee Park***, Lin Wang, Kuk-Jin Yoon.
  European Conference on Computer Vision (ECCV), 2022.

- **[c3]** Unlocking the Potential of Ordinary Classifier: Class-specific Adversarial Erasing Framework for Weakly Supervised Semantic Segmentation.
  Hyeokjun Kweon*, Sung-Hoon Yoon*, Hyeonseong Kim, **Daehee Park**, Kuk-Jin Yoon.
  IEEE/CVF International Conference on Computer Vision (ICCV), 2021.

- **[j1, c2]** Identifying Reflected Images from Object Detector in Indoor Environment Utilizing Depth Information.
  Daehee Park, Yong-Hwa Park.
  IEEE Robotics and Automation Letters (RA-L) and IEEE International Conference on Robotics and Automation (ICRA), 2020.

- **[c1]** A Scanning 3D Sensor and Its Object Recognition for Autonomous Robots.
  Joon-Oh Shin, In-Gyu Jang, **Dae-Hee Park**, Yong-Hwa Park.
  SPIE Conference on MOEMS and Miniaturized Systems XVIII, 2019.

Patents

- Electronic device and method of identifying false image of object attributable to reflection in indoor environment thereof.
  United States Patent, Registered, US11282178B2.

- Dispositif électronique et procédé d'identification de fausse image ou de faux objet imputable à la réflexion dans un environnement intérieur correspondant.
  European Patent, Registered, EP3772701.

- 전자 장치 및 그의 실내 환경에서 반사에 의한 객체 허상을 식별하기 위한 방법.
  Korean Patent, Registered, KR10-2287478-0000.

Positions of Responsibility

- Committee Member, R&D Planning for Culture, Sports and Tourism, Korea Creative Content Agency (KOCCA), 2026

Awards

- Winner, NVIDIA Academic Grant Program, NVIDIA, 2025.12
- Winner, Outstanding Doctoral Graduate Award (Alumni Association Award), KAIST ME, 2025.12
- Winner, Qualcomm Innovation Fellowship Korea (QIFK), 2024.12
- Research Scholarship, Samsung Advanced Institute of Technology, 2022.09–2025.02
- 1st Place, Best Paper Awards, IPIU 2022
- Outstanding Achievement Award, Academic Excellence, KAIST Department of Mechanical Engineering, 2016.09

Academic Reviewing & Service

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- IEEE/CVF International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- AAAI Conference on Artificial Intelligence (AAAI)
- IEEE International Conference on Robotics and Automation (ICRA)
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- IEEE Intelligent Vehicles Symposium (IV)
- Winter Conference on Applications of Computer Vision (WACV)
- ACM International Conference on Multimedia (ACM MM)
- Pattern Recognition (PR)
- IEEE Transactions on Intelligent Vehicles (T-IV)
- IEEE Robotics and Automation Letters (RA-L)