# Daeun Lee

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## RESEARCH INTERESTS

- **Multimodal Learning**: self-correcting and post-training methods, with a particular focus on **video**.
- **Embodied Agents**: adaptive action modeling in robotics with **perceptual modality** (e.g., 3D LiRAR, Gaze, HD Maps).

## EDUCATION

**The University of North Carolina at Chapel Hill** — NC, United States
*Ph.D. Computer Science (Advisor: Mohit Bansal)* — *Aug. 2024 —*

**Korea University** — Seoul, South Korea
*B.E. Department of Statistics* — *Mar. 2019 — Feb. 2024*

## PUBLICATIONS

**[P4] StreamGaze: Gaze-Guided Temporal Reasoning and Proactive Understanding in Streaming Videos**
Daeun Lee, Subhojyoti Mukherjee, Brano Kveton, Ryan Rossi, Viet Lai, David Seunghyun Yoon, Franck Dernoncourt, Trung Bui, Mohit Bansal.
*Under review*

**[P3] IndustryNav: Exploring Spatial Reasoning of Embodied Agents in Dynamic Industrial Navigation**
Yifan Li, Lichi Li, Anh Dao, Xinyu Zhou, Yicheng Qiao, Zheda Mai, Daeun Lee, Zichen Chen, Zhen Tan, Mohit Bansal, Yu Kong.
*Under review*

**[P2] VideoRepair: Self-Correcting Text-to-Video Generation with Misalignment Detection and Localized Refinement**
Daeun Lee, Jaehong Yoon, Jaemin Cho, Mohit Bansal.
*Under review*

**[C5] Video-Skill-CoT: Skill-based Chain-of-Thoughts for Domain-Adaptive Video Reasoning**
Daeun Lee*, Jaehong Yoon*, Jaemin Cho, Mohit Bansal.
*Empirical Methods in Natural Language Processing* ***(EMNLP) Findings, 2025.***

**[C4] BECoTTA: Input-dependent Online Blending of Experts for Continual Test-Time Adaptation**
Daeun Lee*, Jaehong Yoon*, Sung Ju Hwang.
*International Conference on Machine Learning* ***(ICML), 2024***

**[C3] HD Maps are Lane Detection Generalizers: A Novel Generative Framework for Single-Source Domain Generalization**
Daeun Lee, Minhyeok Heo, Jiwon Kim.
*CVPR Data-Driven Autonomous Driving Simulation Workshop* ***(CVPRW), 2024***

**[C2] Resolving Class Imbalance for LiDAR-based Object Detector by Dynamic Weight Average and Contextual Ground Truth Sampling**
Daeun Lee, Jinkyu Kim.
*IEEE/CVF Winter Conference on Applications of Computer Vision* ***(WACV), 2023***

**[C1] Bridging the Domain Gap towards Generalization in Automatic Colorization**
Hyejin Lee, Daehee Kim, Daeun Lee, Jinkyu Kim and Jaekoo Lee.
*European Conference on Computer Vision* ***(ECCV), 2022***

**[P1] Trajectory Prediction by Clustering Human Interactions at Multiple Scales**
Chiho Choi*, Daeun Lee*, Srikanth Malla, Sangjae Bae, Jinkyu Kim.
*Preprint*

## RESEARCH EXPERIENCES

**Adobe** — CA, United States
*Research Intern (Mentor: Subhojyoti Mukherjee, Branislav Kveton)* — *May.2025 — Nov.2025*

**UNC Chapel Hill** — NC, United States
*Research Assistant (Advisor: Mohit Bansal)* — *Aug.2024 — Current*

**KAIST** — Seoul, South Korea
*Research Intern / Contract Researcher (Advisor: Sung Ju Hwang)* — *Mar.2023 — Aug.2024*

**NAVER LABS** — Jungja, South Korea
*Research Intern (Mentor: Minheok Heo)* — *Jul.2022 — Dec.2022*

**Korea University** — Seoul, South Korea
*Research Intern (Advisor: Jinkyu Kim)* — *Jul.2021 — Dec.2022*

## ACADEMIC SERVICES

### Reviewer

CVPR 2022-2026, ECCV/ICCV 2022-2025, AAAI 2025, NeurIPS 2025

### Invited Talks

Sep 2025. **SKKU (Sungkyunkwan University)** Google Developer Groups .
Jan 2025. **Cisco**. *'Reliable Text-to-Video Generation'*

## AWARDS/HONORS

**Travel Grant from ICML 2024 Area Chair** — *Jun.2024*

**Digital Innovation Big Data Contest** — *May.2021*
*2nd place, Korea Enterprise Data Corp.(KED)*

**ICT Autonomous Driving Project** — *Dec.2020*
*5st place, The Federation of Korean Information Industries*

**Financial Big Data Festival** — *Dec.2020*
*1st place, MiraeAsset.Corp*

**Kakao Arena Competition** — *May.2020*
*Top 2%, Kakao.Corp*

**Outstanding Student Scholarship** — *2021-2023*
*Korea University*

## SKILLS

**Programming Ability**: Python, C, Matlab, Git, PyTorch, Tensorflow, Linux, LaTeX, R, SAS
**Language Ability**: Fluent in both Korean and English, Beginner in Chinese

## REFERENCES

**Mohit Bansal** *Professor at UNC Chapel Hill* mbansal@cs.unc.edu

**Jinkyu Kim** *Professor at Korea University* jinkyukim@korea.ac.kr

**Sung Ju Hwang** *Professor at KAIST* sjhwang82@kaist.ac.kr

**Yousung Park** *Emeritus professor at Korea University* yspark433@gmail.com