

Gyusam Chang

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RESEARCH INTERESTS

Machine learning, Deep learning, Computer vision
Domain Generalization, Multi-modal Representation Learning, Parameter-Efficient Fine-Tuning
LLM, VLM, Retrieval-Augmented Generation, Multi-modal Knowledge Graph, Recommender systems
3D Object Detection, 3D Reconstruction, Neural Architecture Design

EDUCATION

Korea University <i>Ph.D. in Artificial Intelligence</i>	South Korea Sep. 2022 – Present
Korea University <i>B.S. in Electronics and Information Engineering</i>	South Korea Mar. 2015 – Aug. 2021

EXPERIENCE

Structures-Computer Interaction Lab @ University of California, Los Angeles <i>Visiting Graduate Researcher (Advisor: Prof. M. Khalid Jawed)</i> <ul style="list-style-type: none">• 3D Reconstruction in Agriculture• Multi-modal 3D Data Collection• Multi-modal 3D Gaussian Splatting	USA Sep. 2024 – Aug. 2025
Computer Vision Lab @ Samsung Advanced Institute of Technology <i>Research Internship (Advisor: Principal Researcher Sujin Jang)</i> <ul style="list-style-type: none">• Autonomous Driving• Domain Adaptation for Multi-view 3D Object Detection• Parameter-Efficient Fine-tuning for Autonomous Driving	South Korea Jun. 2023 – Sep. 2023
Computer Vision Lab @ Samsung Advanced Institute of Technology <i>Visiting Student Researcher (Advisor: Principal Researcher Sujin Jang)</i> <ul style="list-style-type: none">• Autonomous Driving• Unsupervised Domain Adaptation for LiDAR-based 3D Object Detection• Domain Generalization for Multi-view 3D Object Detection	South Korea Sep. 2022 – Apr. 2024
Computer Vision Lab @ Korea University <i>Undergraduate Internship (Advisor: Prof. Sangpil Kim)</i> <ul style="list-style-type: none">• 3D Object Detection• Recommender system	South Korea Sep. 2021 – Aug. 2022

CONFERENCE PUBLICATIONS

- [C7] **RevoNAD: Reflective Evolutionary Exploration for Neural Architecture Design** — G. Chang, J. Yoon, H. Shin, J. Lee, S. Jang, S. Kim[†] (*Pre-print*)
- [C6] **VAT-KG: Knowledge-Intensive Multimodal Knowledge Graph Dataset for Retrieval-Augmented Generation** — H. Park, J. Seo, M. Jang, H. Park, H. Baek, G. Chang, H. Im, S. Kim[†] (*Pre-print*) [Paper]
- [C5] **Reconstruction Using the Invisible: Intuition from NIR and Metadata for Enhanced 3D Gaussian Splatting** — G. Chang, T. Vu, V. Alumootil, H. Song, D. Pham, S. Kim[†], M. K. Jawed[†] (*The 40th Annual AAAI Conference on Artificial Intelligence*, **AAAI 2026**) [Paper]
- [C4] **Unified Domain Generalization and Adaptation for Multi-View 3D Object Detection** — G. Chang*, J. Lee*, D. Lee, D. Ji, J. Kim, S. Jang[†], S. Kim[†] (*The Thirty-eighth Annual Conference on Neural Information Processing Systems*, **NeurIPS 2024**) [Paper]
- [C3] **CMDA: Cross-Modal and Domain Adversarial Adaptation for LiDAR-Based 3D Object Detection** — G. Chang*, W. Roh*, S. Jang, D. Lee, D. Ji, G. Oh, J. Park, J. Kim[†], S. Kim[†] (*The 38th Annual AAAI Conference on Artificial Intelligence*, **AAAI 2024**) [Paper]
- [C2] **ORA3D: Overlap Region Aware Multi-view 3D Object Detection** — W. Roh, G. Chang, S. Moon, G. Nam, C. Kim, Y. Kim, S. Kim[†], J. Kim[†] (*British Machine Vision Conference*, **BMVC 2022**) [Paper]
- [C1] **GRU-based Activity Recognition from Early-stage Motion** — K. Kim, G. Chang, S. Lim, I. Ahn, J. Park, H. Oh[†] (*The Institute of Electronics and Information Engineers*, **IEIE 2020 Summer**) [Paper]

JOURNAL PUBLICATIONS

- [J2] **Cross-Modal Domain Generalization for Multi-view 3D Object Detection** — G. Chang, W. Ryoo, S. Jang, J. Kim, D. Lee, D. Ji, S. Kim (*Pre-print*)
- [J1] **Self-Supervised Multimodal Graph Neural Network** — S. Kim, S. Yun, J. Lee, G. Chang, W. Roh, D. Sohn, J. Lee, H. Park[†], S. Kim[†] (*Information Sciences*, **2024**) [Paper]

PATENTS

- [P3] **Method and apparatus for 3D object detection** — *In progress.*
- [P2] **Method and apparatus with object detection model training** — *US Patent App. 18/897,759, 2025*
- [P1] **Method and apparatus with object detector training** — *US Patent App. 18/451,287, 2024*

ACADEMIC SERVICE

Conference

- NeurIPS 2025
- AAAI 2026

Journal

- IEEE T-ITS

SKILLS

Programming

- Fluent in Python, Pytorch, Tensorflow, Scikit-Learn, C/C++, Go, MATLAB, Verilog, L^AT_EX