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

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EDUCATION

Korea University South Korea
Ph.D. in Artificial Intelligence *Sep. 2022 – Present*

Korea University South Korea
B.S. in Electronics and Information Engineering *Mar. 2015 – Aug. 2021*

EXPERIENCE

Visiting Graduate Researcher @ University of California, Los Angeles USA
Advisor: M. Khalid Jawed (Mechanical and Aerospace Engineering) *Sep. 2024 – Aug. 2025*
- 3D Reconstruction in Agriculture
- Multi-modal 3D Data Collection
- Multi-modal 3D Gaussian Splatting

Research Internship @ Samsung Advanced Institute of Technology South Korea
Advisor: Sujin Jang (Computer Vision Technical Unit) *Jun. 2023 – Sep. 2023*
- Autonomous Driving
- Domain Adaptation for Multi-view 3D Object Detection
- Parameter-Efficient Fine-tuning for Autonomous Driving

Visiting Student Researcher @ Samsung Advanced Institute of Technology South Korea
Advisor: Sujin Jang (Computer Vision Technical Unit) *Sep. 2022 – Apr. 2024*
- Autonomous Driving
- Unsupervised Domain Adaptation for LiDAR-based 3D Object Detection
- Domain Generalization for Multi-view 3D Object Detection

Undergraduate Internship @ Korea University South Korea
Advisor: Sangpil Kim (Computer Vision Lab) *Sep. 2021 – Aug. 2022*
- 3D Object Detection
- Recommender system

Software Engineer @ Rootee Health Corp. South Korea
 Jun. 2021 – Dec. 2021
- Fundus Camera Development
- Auto Focus System Development
- Pupil Detection Using Fundus Camera

Conference Publications

[C7] RevoNAD: Reflective Evolutionary Exploration for Neural Architecture Design — **G. Chang**, J. Yoon, H. Shin, J. Lee, S. Jang, S. Kim[†] (*Under Review*)

[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[†] (*Under Review*) [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 (*Under Review*)

[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, LaTeX