

# HONGYEOB KIM

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## RESEARCH INTERESTS

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- **Multi-modal perception:** Integrating vision, language, audio, and touch for comprehensive machine understanding
- **Self-supervised learning:** Leveraging unlabeled or weakly labeled data for efficient representation learning
- **Human-robot interaction:** Enhancing communication and collaboration between humans and AI-driven robotic systems
- **Interpretable AI:** Bridging the gap between black-box AI models and human understanding through explainability

*Keywords: Multi-modal learning, self-supervised learning, human-robot interaction, and interpretable AI, but **not limited to**.*

## EDUCATION

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### Sungkyunkwan University (SKKU)

*M.Sc. of Immersive Media Eng. (advisor: Prof. Sungeun Hong)*

Sep. 2023 - Present

*Seoul, South Korea*

### Korea & Maritime University (KMOU)

*B.E. of Refrigeration, Air-conditioning and Energy Systems Eng.*

Mar. 2013 - Aug. 2019

*Busan, South Korea*

- GPA: 4.06 / 4.5

## PUBLICATIONS

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⟨ International Conferences ⟩ ( Equal contribution are denoted by “\*”, [C] for conference, [J] for journal. )

[C2] **Hongyeob Kim**, I. Jung, D. Suh, S. Lee, and S. Hong, “Question-Aware Gaussian Experts for Audio-Visual Question Answering”, *CVPR*, 2025. (Accept. rate 22.12%) [\[arXiv\]](#) [\[Project Page\]](#)

[C1] Y. Moon, J. Kim, **Hongyeob Kim**, K. Son, and T.-H. Oh, “TextManiA: Enriching Visual Feature by Text-driven Manifold Augmentation”, *ICCV*, 2023. (Accept. rate 25.00%) [\[Paper\]](#) [\[arXiv\]](#) [\[Project Page\]](#)

## PROJECTS

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### Audio-Visual Question Answering via Question-aware Encoder and Prompt Generation

*M.Sc. Students Fellowship, National Research Foundation of Korea (NRF)*

Sep. 2024 - Aug. 2025

## EXPERIENCE

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### Algorithmic Machine Intelligence Lab

*External Research Assistant (advisor: Prof. TaeHyun Oh)*

Jul. 2022 - May. 2023

*Pohang, South Korea*

- Conducted research on text-driven visual augmentation, leading to a publication in *ICCV* 2023
- Developed baseline models and performed comparative analysis on classification and few-shot object detection

### NuviLab

*AI Enginner*

Dec. 2021 - Apr. 2023

*Seoul, South Korea*

- Designed and deployed an optimized tray scanning system for resource-constrained environments
- Optimized code both for train and inference, enhancing efficiency and reducing service costs and training time

### Upstage

*AI Reserach Enginner Intern*

Aug. 2021 - Nov. 2021

*Yongin, South Korea*

- Conducted data analysis to identify and address weaknesses in AI models
- Implemented DBNet and TextFuseNet using PyTorch Lightning for improved text detection

### mAy-I

*AI Reserach Intern*

Sep. 2020 - Dec. 2020

*Seoul, South Korea*

- Implemented PoseFix in PyTorch to enhance human pose estimation accuracy.
- Developed a generative model to improve keypoint estimation in occluded scenarios.