Yoori Oh

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Research Interests

Multi-modal Learning, Video Understanding, Audio-Language Understanding, Audio-Visual Speech Processing

My research focuses on **multi-modal learning**, aiming to achieve a **deep understanding** of various modalities to build more comprehensive and intelligent systems. I am expanding my foundational work in **audio-language understanding** to the broader challenges of **video understanding**, alongside advanced **audio-visual speech synthesis**. I address fundamental challenges in imbalanced multi-modal data, designing optimized cross-modal embeddings to enhance both deep comprehension and expressive, controllable synthesis.

Education Seoul National University

Seoul, Korea

Ph.D in Intelligence and Information

Sep. 2020 – Aug. 2025

Advisor: Prof. Kyogu Lee

Sookmyung Women's University

Seoul, Korea

M.S in Computer Science

Mar. 2015 – Feb. 2017

Advisor: Prof. Yoonhee Kim

Sookmyung Women's University

Seoul, Korea

B.S in Mathematics and Computer Science

Mar. 2010 - Feb. 2015

Work experiences

Korea Institute of Patent Information

Daejeon, Korea

Researcher

Aug. 2017 – Aug. 2020

Korea Institute of Patent Information

Daejeon, Korea

Intern

Apr. 2017 - Aug. 2017

Publications

International Conferences

Understanding Audio-Text Retrieval Through Singular Value Decomposition

Yoori Oh, Yoseob Han, Joonhyeon Bae, Jaeheon Sim and Kyogu Lee

 $ACM\ SIGIR\ Conference\ on\ Research\ and\ Development\ in\ Information\ Retrieval$

(SIGIR), 2025

Speaking Without Sound: Multi-speaker Silent Speech Voicing with

Facial Inputs Only

Jaejun Lee, Yoori Oh and Kyogu Lee

ICASSP, 2025

Distance Sampling-based Paraphraser Leveraging ChatGPT for Text Data Manipulation

Yoori Oh*, Yoseob Han* and Kyogu Lee

ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2024

Hear Your Face: Face-based voice conversion with F0 estimation

Jaejun Lee, **Yoori Oh**, Injune Hwang and Kyogu Lee *INTERSPEECH*, 2024

Semi-supervised Learning for Continuous Emotional Intensity Controllable Speech Synthesis with Disentangled Representations

Yoori Oh, Juheon Lee, Yoseob Han and Kyogu Lee *INTERSPEECH*, 2023

Exploring Train and Test-Time Augmentations for Audio-Language Learning

Eungbeom Kim*, Jinhee Kim*, **Yoori Oh**, Kyungsu Kim, Minju Park, Jaeheon Sim, Jinwoo Lee and Kyogu Lee *arxiv*, 2022

A Hybrid Cloud Resource Clustering Method Using Analysis of Application Characteristic

Yoori Oh and Yoonhee Kim

IEEE 2nd International Workshops on Foundations and Applications of Self* Systems (FAS*W), 2017

A SLA-based Spark Cluster Scaling Method in Cloud Environment

Yoori Oh, Jieun Choi, Eunjung Song, Moonji Kim and Yoonhee Kim 18th Asia-Pacific Network Operations and Management Symposium (APNOMS), 2016

International Journals

A Resource Recommendation Method based on Dynamic Cluster Analysis of Application Characteristics

Yoori Oh and Yoonhee Kim *Cluster Computing, 2019*

Patents

METHOD AND APPARATTUS FOR AUGMENTING AUDIO-TEXT MULTIMODAL DATA IN TRAIN AND TEST TIME

Kyogu Lee, Jinhee Kim, Eungbeom Kim, **Yoori Oh**, Jaeheon Sim, Jinwoo Lee, Kyungsu Kim and Minju Park

PCT, application number : PCT/KR2023/017075, 2023. 10

METHOD AND APPARATTUS FOR AUGMENTING AUDIO-TEXT MULTIMODAL DATA IN TRAIN AND TEST TIME

Kyogu Lee, Jinhee Kim, Eungbeom Kim, **Yoori Oh**, Jaeheon Sim, Jinwoo Lee, Kyungsu Kim and Minju Park

KR, application number: 10-2023-0146812, 2023. 10

METHOD AND APPARATUS FOR STRUCTURING PATENT CLAIMS

Youngmin Ahn, Hojin Park, Suhyun Oh, Jonghyun Chae, Bong-Gun Lee, Yoonho Jung, Jaeok Min and **Yoori Oh**

KR, registration number: 10-2181677, 2020. 11

MOBILE TERMINAL CONTROL METHOD FOR PERSONALIZED DIETARY COACHING

Yoonhee Kim, Jieun Choi, Yoori Oh and Youngran Jeon

KR, registration number: 10-2016263, 2019. 8

Honors and	Teaching assistance scholarship (Seoul National University)	2024
scholarships	Brain Korea 21 Plus scholarship	2020 - 2023
	Bronze Award (12th open source software developer competition)	2018. 11
	Best Presentation Award (KIISE, KSC 2016)	2017. 01
	Bronze Best Paper Award (IEEE Student Paper Contest)	2016. 12
	Grand Prize (2015 Convergence App Contest)	2015. 12
	Best Paper Award (KSII 2015)	2015. 10
Teaching experience	Teaching assistant, Seoul National University	Spring 2024

Course title : From Sound to Meaning (Prof. Kyogu Lee)