Suyeon Lee

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Research Interest

My research focuses on enhancing conversational and auditory experiences in challenging acoustic environments. I am also interested in exploring generative models and multimodal contrastive learning.

Education

Korea Advanced Institute of Science and Technology (KAIST) Mar 2025 - Feb 2028 (Expected)
Ph.D. in Electrical Engineering *Advisor: Prof. Joon Son Chung*

Korea Advanced Institute of Science and Technology (KAIST) Mar 2023 - Feb 2025
M.S. in Electrical Engineering *Advisor: Prof. Joon Son Chung*
- Thesis: Multi-modal Speech and Audio Separation System

Korea Advanced Institute of Science and Technology (KAIST) Mar 2018 - Feb 2023
B.S. in Electrical Engineering

Experience

Undergraduate Research Intern Mar 2022 - Feb 2023
Multimodal AI Lab, KAIST *Advisor: Prof. Joon Son Chung*
- Acquired foundational knowledge in generative models, specifically exploring diffusion-based models
- Implemented active speaker detection baselines using TalkNet-ASD

Research Intern Sep 2021 - Feb 2022
AIRS Company, Hyundai Motor Group *Seoul, South Korea*
- Developed wake word detection baseline model for in-car voice assistant

Undergraduate Research Intern Mar 2021 - Aug 2021
SSSC Lab, KAIST *Advisor: Prof. Hoirin Kim*
- Applied fundamental machine learning principles to develop a baseline speech recognition model utilizing PyTorch.

Honors and Awards

NIST Speaker Recognition Evaluation (SRE) 2024
1st Place in the Audio Track and 4th Place in the Audio-Visual Track *San Juan, Puerto Rico*

Skills

Programming: PyTorch, Python, C

Academic Activities

Teaching Assistant Fall 2023, Fall 2025
KAIST - EE488: Deep learning for Computer Vision
- Supported students in coding assignments by offering one-on-one debugging and technical guidance

Languages

Korean: Native

English: Proficient

PUBLICATIONS *: Equal Contribution

[4] **Model-Guided Dual-Role Alignment for High-Fidelity Open-Domain Video-to-Audio Generation**
Kang Zhang*, Trung X. Pham*, **Suyeon Lee**, Axi Niu, Arda Senocak, Joon Son Chung
NeurIPS 2025

[3] **FlowAVSE: Efficient audio-visual speech enhancement with conditional flow matching**
Chaeyoung Jung, **Suyeon Lee**, Ji-Hoon Kim, Joon Son Chung
Interspeech 2024

[2] **Seeing through the conversation: Audio-visual speech separation based on diffusion model**
Suyeon Lee*, Chaeyoung Jung*, Youngjoon Jang, Jaehun Kim, Joon Son Chung
ICASSP 2024

[1] **TalkNCE: Improving active speaker detection with talk-aware contrastive learning**
Chaeyoung Jung*, **Suyeon Lee***, Kihyun Nam, Kyeongha Rho, You Jin Kim, Youngjoon Jang, Joon Son Chung
ICASSP 2024