

# SANGMIN LEE

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## ABOUT ME

I am a Ph.D. student in Electrical and Electronics Engineering at Yonsei University, advised by Prof. Hong-Goo Kang in the DSP & AI Laboratory. My research focuses on multilingual speech and natural language processing, as well as speech large language models. I am passionate about developing scalable and inclusive AI systems that extend the benefits of technology to underrepresented and low-resource communities.

## RESEARCH INTEREST

**Multilingual Speech and NLP:** Developing models that understand and generate speech across multiple languages, emphasizing inclusiveness and accessibility.

**Speech Large Language Models (Speech LLMs):** Exploring models that unify speech and text for end-to-end spoken language understanding and generation.

**Multimodal Speech Models:** Integrating speech with other modalities (e.g., text or vision) to enhance contextual comprehension and interaction.

## EDUCATION

<b>Yonsei University</b>	Seoul, South Korea
Ph.D. in Electrical and Electronics Engineering	03/2024 – Present
◦ Advised by Prof. Hong-Goo Kang, DSP&AI Laboratory	
<b>Korea University</b>	Seoul, South Korea
B.S. in Computer Science and Engineering	03/2018 – 02/2024
◦ Graduated with strong focus on deep learning, computer vision, and signal processing.	

## WORK EXPERIENCE

<b>DSP&amp;AI Lab, Yonsei University</b>	Seoul, South Korea
Integrated M.S. & Ph.D. Student	03/2024 – Present
◦ Researching massively multilingual speech recognition and generation.	
<b>DSP&amp;AI Lab, Yonsei University</b>	Seoul, South Korea
Undergraduate Researcher	01/2024 – 02/2024
◦ Researching fundamentals of speech signal and generative audio modeling.	
<b>CV Lab, Korea University</b>	Seoul, South Korea
Undergraduate Researcher	08/2023 – 12/2023
◦ Developed speech-driven 3D facial animation systems for realistic talking head generation.	
<b>Neoforce Incorporation</b>	Daejeon, South Korea
Full-Stack Developer	10/2021 – 02/2022
◦ Developed Python-based 3D medical imaging applications for diagnostic visualization.	
<b>Republic of Korea Army</b>	Incheon, South Korea
Military Service	04/2020 – 10/2021
◦ Completed mandatory national service.	

## PUBLICATION

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### Conference Papers

#### C2. UniCoM: A Universal Code-Switching Speech Generator

Sangmin Lee, Woojin Chung, Seyun Um, and Hong-Goo Kang — *Findings of EMNLP 2025 (Poster)*

#### C1. LAMA-UT: Language Agnostic Multilingual ASR Through Orthography Unification and Language-Specific Transliteration

Sangmin Lee, Woojin Chung, and Hong-Goo Kang — *AAAI 2025 (Oral)*

### Preprints

#### P4. AEGIS: Awareness-Enhanced Guidance for Iterative Safeguard

Kyungwon Park, Sangmin Lee, Heejae Chon, and Hyungu Kang — *arXiv:2501.01234*

#### P3. UniverSR: Unified and Versatile Audio Super-Resolution via Vocoder-Free Flow Matching

Woongjib Choi, Sangmin Lee, Hyeongseob Lim, and Hong-Goo Kang — *arXiv:2501.01235*

#### P2. SAGE-LD: Towards Scalable and Generalizable End-to-End Language Diarization via Simulated Data Augmentation

Sangmin Lee, Woongjib Choi, Jihyun Kim, and Hong-Goo Kang — *arXiv:2501.01236*

#### P1. Talk3D: High-fidelity Talking Portrait Synthesis via Personalized 3D Generative Prior

Jaehoon Ko, Kyusun Cho, Joungbin Lee, Heeji Yoon, Sangmin Lee, Sangjun Ahn, and Seungryong Kim — *arXiv:2501.01237*

## LANGUAGES

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Korean

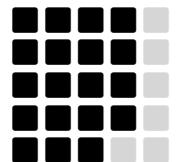


English

## TECHNICAL SKILLS

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Python



PyTorch

CUDA

Linux

C/C++