Sangmin Lee

◇ Seoul, South Korea ◇ sangmin_lee@dsp.yonsei.ac.kr ◇ +82-10-8391-0332 ◇ sanghyang00.github.io

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

Yonsei University — Seoul, South Korea
Ph.D. in Electrical and Electronics Engineering — 03/2024 – Present
- Advised by Prof. Hong-Goo Kang, DSP&AI Laboratory

Korea University — 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

DSP&AI Lab, Yonsei University — Seoul, South Korea
Integrated M.S. & Ph.D. Student — 03/2024 – Present
- Researching massively multilingual speech recognition and generation.

DSP&AI Lab, Yonsei University — Seoul, South Korea
Undergraduate Researcher — 01/2024 – 02/2024
- Researching fundamentals of speech signal and generative audio modeling.

CV Lab, Korea University — Seoul, South Korea
Undergraduate Researcher — 08/2023 – 12/2023
- Developed speech-driven 3D facial animation systems for realistic talking head generation.

Neoforce Incorporation — Daejeon, South Korea
Full-Stack Developer — 10/2021 – 02/2022
- Developed Python-based 3D medical imaging applications for diagnostic visualization.

Republic of Korea Army — Incheon, South Korea
Military Service — 04/2020 – 10/2021
- Completed mandatory national service.

Publication

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

Korean
English

Technical Skills

Python
PyTorch
CUDA
Linux
C/C++