

JIHWAN SEOL

M.S. Applicant @ Seoul, Korea
Speech Processing, Speech Generation, Speech-LLM

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Education

Chung-Ang University <i>Bachelor of Science in School of Computer Science and Engineering</i>	Mar 2019 – Aug 2025 <i>Seoul, Korea</i>
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Research Experience

Explainable Language Understanding (ELU) Lab, Chung-Ang University <i>Undergraduate Student Researcher</i>	July 2023 – December 2025 <i>Seoul, Korea</i>
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- **Developing** instruction-based evaluation dataset incorporating emotional and paraverbal speech cues.
- **Designing** model architectures to mitigate acoustic gender bias in speech-language models.
- **Conducting research** on cross-modal and emotion-paraverbal adaptation using benchmark of linguistic minimal pairs.
- **Constructed** evaluation datasets for measuring social bias, and categorical gender bias in speech-language models.
- **Developed** a robust target speech extraction system capable of handling diverse overlap ratios and adverse acoustic conditions.
- **Implemented** a prompt-conditioned TTS system by integrating StyleTTS2 with PromptTTS.

Publications (C: conference, W: workshop, T: technical report, P: preprint, *: equal contribution)

- [P1] **VORTEX: VARIOUS OVERLAP RATIO FOR TARGET SPEECH EXTRACTION**
R. Oh*, J. Seol*, B. Kim *Preprint, Submitted to ICASSP 2026 (C, under review)*
- [P2] **ACOUSTIC-BASED GENDER DIFFERENTIATION IN SPEECH-AWARE LANGUAGE MODELS**
J. Choi*, J. Seol, N. Kim, C. Cho, E. Cho, . Kim *Preprint, Submitted to ICLR 2026 (C, under review)*
- [C1] **VOICEBBQ: INVESTIGATING EFFECT OF CONTENT AND ACOUSTICS IN SOCIAL BIAS OF SPOKEN LANGUAE MODEL**
J. Choi*, R. Oh, J. Seol, B. Kim *EMNLP 2025 main (C, accepted)*

Awards & Honors

Solution Challenge – Global Top 100 <i>Google Developers Groups</i>	2024 <i>Global</i>
<ul style="list-style-type: none">• Selected as one of the Global Top 100 teams (out of over 1,700 participating teams) in the Google Solution Challenge.• Developed a solution aligned with one or more of the United Nations Sustainable Development Goals using Google technologies.	
Full-tuition scholarship <i>Chung-Ang University</i>	2019 – 2025 <i>Seoul, South Korea</i>
<ul style="list-style-type: none">• Awarded a merit-based scholarship covering full tuition for four years.	

Specialized Skills

Programming Languages: Python, C/C++, Bash, CUDA basics, Dart (Flutter), SQL

Deep Learning Frameworks: PyTorch, TensorFlow, Keras

Audio & Speech Toolkits: HuggingFace Transformers, Librosa, SoundFile, Audacity, Amphion, OpenAI Whisper, ESPnet, Kaldi

Experiment Management & Infrastructure: PyTorch Lightning, Tensorboard, Git, Docker, GCP

Miscellaneous: Linux, Vim, L^AT_EX

Research Interests

Speech-Language Modeling: acoustic-conditioned LMs, speech-aware instruction following

Bias & Fairness in Multimodal Models: gender bias, paraverbal cues, social bias evaluation

Cross-Modal Learning: emotion-paraverbal adaptation, multimodal representation learning

Generative Speech Models: TTS, target speech extraction, style conditioning