

Haeri Kim

✉ haeri.kim1108@gmail.com | 🌐 [haeri-kim1108.github.io](https://github.com/haeri-kim1108) | [in](#) [Haeri Kim](#) | 📞 +82 10-4820-9080

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) 2019 - 2021

M.S. in Electrical Engineering

Thesis: Diagnosing Data Samples for Robust GAN Training

Advisor: Prof. Hye Won Chung

Korea Advanced Institute of Science and Technology (KAIST) 2014 - 2019

B.S. in Electrical Engineering

WORK EXPERIENCE

Samsung Research Jul 2021 - present

– AI Solution Team (AI Research Engineer)

– Research topics: On-device Automatic Speech Recognition (ASR), Streaming ASR, Context-aware ASR, Multilingual ASR

LG CNS Jun 2017 - Jul 2017

– New Technology Development Team (Internship)

– Research topics: Object tracking

PUBLICATIONS

*: Equal contribution

Conference Papers

A More Accurate Internal Language Model Score Estimation for the Hybrid Autoregressive Transducer

Kyungmin Lee*, [Haeri Kim*](#), Sichen Jin, Jinhwan Park, Youngho Han

Interspeech, 2023

Self-Diagnosing GAN: Diagnosing Underrepresented Samples in Generative Adversarial Networks

Jinhee Lee*, [Haeri Kim*](#), Youngkyu Hong*, Hye Won Chung

Conference on Neural Information Processing Systems (NeurIPS), 2021

Under Review

BBPE16: UTF-16-Based Byte-Level Byte-Pair Encoding for Improved Multilingual Speech Recognition

Hyunsik Kim*, [Haeri Kim*](#), Munhak Lee, Kyungmin Lee

Submitted to *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2026

FUNDING & FELLOWSHIPS

Samsung Electronics Overseas PhD Fellowship Jul 2026 - Jun 2031

Full tuition and living stipend for 5 years; awarded through a competitive internal selection process

PROJECTS

Speech Large Language Model (SpeechLLM) May 2025 - present

- Research and development of methods to integrate a speech encoder with a large language model (LLM) for end-to-end training and multi-modal understanding

Multilingual ASR Model Jan 2024 - present

- Research and development of a multilingual ASR model that unifies multiple monolingual ASR systems into a single model
- Reduce total model footprint by replacing 23+ language-specific ASR models with a unified model

Galaxy S24 Speech Translation System Jan 2023 - Dec 2023

- Development of streaming on-device ASR models for Galaxy S24 speech translation system
- Training and optimization of streaming ASR models for multiple languages
- [Related article](#)

Samsung Bespoke AI Mar 2022 - Dec 2022

- Development of on-device ASR models for home appliances
- Model adaptation for home appliance domains (washing machines, air conditioners, refrigerators)
- [Related article](#)

On-Device ASR Model for Smart TV Mar 2022 - Dec 2022

- Development of on-device ASR models for Smart TV
- Research and development of a language model (LM) fusion algorithm to improve recognition of TV program names and other domain-specific entities
- Development of a spell correction algorithm to enhance named-entity recognition accuracy

Data Valuation for Generative Models Mar 2020 - Jun 2021

- Research on devising data valuation measures for generative models
- Focused on Generative Adversarial Network (GAN) and utilized training dynamics to diagnose training data

Human Face Tracking Using Multi-Domain Network Jun 2017 - Jul 2017

- Researched state-of-the-art object tracking technology and implemented it for human face tracking

PATENT

Multilingual Speech Recognition Method and Device

Kyungmin Lee, [Haeri Kim](#), Jinhwan Park, Hyeongmin Oh
PCT/KR2024/016938, 2024

Electronic device for performing speech recognition and control method thereof

Kyungmin Lee, Jaeyoung Roh, Jonguk Yoo, Youngho Han, [Haeri Kim](#)
PCT/KR2023/017891, 2023

Self-Diagnosing Generative Adversarial Networks to Diagnose and Emphasize Underrepresented Samples

Hye Won Chung, Jinhee Lee, [Haeri Kim](#), Youngkyu Hong
KR Patent 10-2022-0032061, 2022

TEACHING & TUTORING

Teaching Assistant

- | | |
|---|---------------------|
| – Information Theory (EE623) | Sep 2020 - Dec 2020 |
| – Probability and Introductory Random Processes (EE210) | Mar 2020 - Jun 2020 |
| – Signals and Systems (EE202) | Sep 2019 - Dec 2019 |

Tutor

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| – Programming Structure for Electrical Engineering (EE209) | Sep 2019 - Feb 2020 |
| – Introduction to Programming (CS101) | Mar 2018 - Jun 2018 |

SKILLS

Programming Languages	Python, C, C++, MATLAB
Libraries	PyTorch, TensorFlow, NumPy, pandas, scikit-learn, Matplotlib