EUISUNG KIM

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PROFESSIONAL EXPERIENCES

Samsung Research America, Mountain View, CA Oct. 2022 - Present
Machine Learning Research Engineer *USA*
- Developing Samsung Bixby system

Kakao Enterprise, Korea (spin-off of Kakao) Dec. 2019 - Oct. 2022
ML Engineer *South Korea*
- Lead research and development of English pronunciation assessment system
- Developed the latest E2E-based ASR system
- Researched speech enhancement and echo cancellation algorithms for video call and AI speaker
- Designed architecture of 2nd Generation Kakao AI smart speaker

Kakao, Korea Oct. 2018 - Nov. 2019
ML Engineer *South Korea*
- Developed Tensorflow based in-house acoustic model of ASR framework, providing STT service for about 100K users
- Developed data pipeline, which stores, refines, and transfers around 30K hours of broadcasting audio and text data using data engineering (Hadoop Eco.) for speech-related service and development

Korea International Cooperation Agency (KOICA) Feb. 2012 - Aug. 2014
International cooperation Personnel *Perú*
- Organized and Managed the Project "Young Global Technology Leaders".
- Taught computer programming languages to high school and local university students to help them reach their career goals in Moquegua, Perú.

PUBLICATIONS

[1] **E Kim**, JJ Jeon, H Seo, H Kim, "Automatic Pronunciation Assessment using Self-Supervised Speech Representation Learning," in INTERSPEECH 2022.

[2] D Lim, S Jung, **E Kim**, "JETS: Jointly Training FastSpeech2 and HiFi-GAN for End to End Text to Speech," in INTERSPEECH 2022.

[3] **E Kim**, H Seo, "SE-Conformer: Time-Domain Speech Enhancement using Conformer," in INTERSPEECH, 2021.

[4] JJ Jeon, **E Kim**, "Multitask Learning and Joint Optimization for Transformer-RNN-Transducer Speech Recognition," in ICASSP, 2021.

[5] **E Kim**, JJ Jeon, H Seo, "U-Convolution based Residual Echo Suppression with Multiple Encoders," in ICASSP, 2021.

[6] J Kim, Y Lee, **E Kim**, "Accelerating RNN Transducer Inference via Adaptive Expansion Search," in IEEE Signal Processing Letters 27, 2020. (SCI, IF=3.105)

[7] **E Kim**, H Song, JW Shin, "Affective Latent Representation of Acoustic and Lexical Features for Emotion Recognition," in Sensors, 2020. (SCIE, IF=3.275)

[8] **E Kim**, JW Shin, "DNN-based Emotion Recognition based on Bottleneck Acoustic Features and Lexical Features," in ICASSP, 2019.

PATENTS

[1] **E Kim**, H Seo, "Foreign Language Pronunciation assessment apparatus and control method thereof," *pending patent*, US 17/725,632, 2022.

[2] JJ Jeon, **E Kim**, "Method and apparatus for speech recognition and beam search," ***issued patent***, KR 102386627, 2022.

[3] **E Kim**, Y Kim, D Jung, "Method and apparatus for construction of broadcasting speech database," ***issued patent***, KR 102267725, 2021.

[4] JJ Jeon, **E Kim**, "Speech recognition system and learning method thereof," ***issued patent***, KR 102344218, 2021.

[5] **E Kim**, JJ Jeon, "Method and apparatus for acoustic signal processing," *pending patent*, KR 1020200170663, 2020.

[6] JW Shin, **E Kim, "**Deep neural network bottleneck based speech emotion recognition method," ***issued patent***, KR 102110791, 2020.

EDUCATION

Gwangju Institute of Science and Technology, Korea

M.S. in Electrical Engineering and Computer Science Aug. 2018

- Multimodal speech emotion recognition. Published in ICASSP-19 and Sensors-20

Handong Global University, Korea

B.S. in Computer Science Aug. 2016

HONORS and AWARDS

Government Scholarship, GIST, Aug. 2016 - Feb. 2018

SKILL SET

Python, PyTorch, Tensorflow, C++, Git, Docker, GitHub Actions, CircleCI, Kubernetes, Hadoop