Kang-wook Kim

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EXPERIENCE

MINDsLab Inc.   Mar. 2020 – Mar. 2022
Senior AI Scientist   Pangyo, Kyeonggi

- Worked as the **leader of the speech synthesis team**, responsible for developing **Text-to-Speech (TTS) architectures and training recipes** used in various applications such as the Twitch donation system, weather forecasts, and AI Human.
- Developed a robust autoregressive TTS system capable of generating **long sentences**, with a maximum output of **10 minutes of speech**.
- Improved the sound quality and inference speed of the TTS system, resulting in a **mean opinion score increase from 3.84 to 4.18**, which is comparable to the **ground-truth value of 4.47**.
- Built a pronunciation evaluation engine for foreigners using a small and **unrefined dataset (4hrs, 12 speakers)**, achieving **92% accuracy** on unseen data from speakers.
- Improved the sound quality of the voice conversion system, resulting in mean opinion scores for **naturality and speaker similarity** that are comparable to ground-truth.
- Served as a substitute for mandatory military service from *Mar. 2020* to *Feb. 2022*.

Supertone Inc.   Apr. 2022 – Now
Research Intern   Seoul

- Currently working as a part-time research intern during the semester and full-time during vacation.
- Conducting research aimed at increasing the phoneme classification accuracy of singing voices.

EDUCATION

Seoul National University   Mar. 2018 – Now
B.S. in Electronical and Computer Engineering (Overall GPA: 3.99/4.30) (Major: 4.07/4.30)   Seoul, Korea

Gyeonggi Science High School for the gifted   Mar. 2015 – Feb. 2018
High school for gifted students in mathematics, science, and informatics   Gyeonggi, Korea

PUBLICATION

Conference

- **Kang-wook Kim**, Seung-won Park, Junhyeok Lee, and Myun-chul Joe, "Assem-VC: Realistic Voice Conversion by Assembling Modern Speech Synthesis Techniques," ***Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022***

Workshop

- **Kang-wook Kim** and Junhyeok Lee, "Controllable and Interpretable Singing Voice Decomposition via Assem-VC," ***NeurIPS Workshop on ML for Creativity and Design 2021*** (Oral)
- Ki-Ung Song*, Dongseok Shim*, **Kang-wook Kim***, Jae-young Lee, Younggeun Kim, "FS-NCSR: Increasing Diversity of the Super-Resolution Space via Frequency Separation and Noise-Conditioned Normalizing Flow," ***CVPR NTIRE Workshop 2022***

Demo Track

- Hyoung-Kyu Song, Sang Hoon Woo, Junhyeok Lee, Seungmin Yang, Hyunjae Cho, Dongho Choi, **Kang-wook Kim**, Youseong Lee, "Talking Face Generation with Multilingual TTS," ***CVPR Demo Track 2022***

OPEN SOURCE CONTRIBUTION

Assem-VC - voice conversion system (Stars: 249) : Official repository of our paper.
UnivNet - vocoder (Stars: 192) : I reproduced the results in the paper while official implementation is unavailable.

HONORS and AWARDS

- Presidential scholarship on informatics 2018 - 2023

- Hanseong Sonjaehan Scholarship 2016 - 2017

- Exemplary Youth Awards in Gyeonggi-do 2016, Science and Technology sector

- *Korea Olympiad in Informatics (KOI)* **Gold (4th place) at 2015**; Silver, Bronze at 2014, 2011.

- Completion of winter school for International Physics Olympiad (IPhO) candidates – 2015, 2016