# Kang-wook Kim

full324@snu.ac.kr | wookladin | Kang-wook Kim

## SUMMARY

I am an undergraduate student majoring in ECE at Seoul National University. I work as Senior AI Scientist in MINDsLab. My research interest lies in speech synthesis and generative models.
My goal is to make user-friendly AI services or techniques which can benefit humans. I always focus on improving the usability of my AI model from the user's point of view, and I love these works.

## EXPERIENCE

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

- Worked as the **leader of speech synthesis team**, making **Text-to-Speech (TTS) architectures and training recipes** that were widely used such as the donation system of Twitch, weather forecast, and AI Human.
- Developed robust autoregressive TTS system to generate **long sentences**, which can generate a **maximum of 10 minutes of speech**.
- Improved sound quality and inference speed of TTS system at once, raised **mean opinion score from 3.84 to 4.18**, which is comparable to **4.47 of ground-truth** value.
- Developed pronunciation evaluation engine for foreigners with the **small, unrefined dataset (4hrs, 12 speakers)**, which achieved **92% accuracy** for unseen speaker's dataset.
- Improved the sound quality of the voice conversion system, which achieved mean opinion scores in **naturality and speaker similarity** comparable to ground-truth.
- Worked as a substitute of mandatory military service, *2020.03 – 2022.02*

## EDUCATION

**Seoul National University** Mar. 2018 – Now
*B.S. in Electronical and Computer Engineering (GPA: 3.92/4.30)* 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," To appear in ***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)**

## OPEN SOURCE CONTRIBUTION

**Assem-VC - voice conversion system (Stars: 166)** : Official repository of our paper.
**UnivNet - vocoder (Stars: 105)** : I reproduced the results in the paper while official implementation is unavailable.

## HONORS and AWARDS

- Presidential scholarship on informatics 2018 - 2023, fully funded scholarschip for undergrad course
- Hanseong Sonjaehan Scholarship 2016 - 2017, 5M KRW per year
- Exemplary Youth Recognition 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