

Kang-wook Kim

✉ full324@snu.ac.kr | 🏠 kwkim.me | 🔄 wookladin | 🌐 Kang-wook Kim

EDUCATION

Seoul National University

Mar. 2018 – Aug. 2024

B.S. in Electrical and Computer Engineering, Summa Cum Laude

Seoul, Korea

- Overall GPA: 3.84/4.00; Major GPA: 3.96/4.00
- Took a 2-year leave to complete mandatory military service at Maum AI Inc. (2020-2021)

Gyeonggi Science High School for the Gifted

Mar. 2015 – Feb. 2018

Specialized high school for gifted students in mathematics, science, and informatics.

Gyeonggi, Korea

RESEARCH EXPERIENCE

Vision and Learning Lab, SNU

Mar. 2024 – Present

Research Intern

Supervisor: Gunhee Kim

- Contributed to a 3D scene generation project using multi-modal inputs.
- Researched human-like spoken dialogue generation with LLMs and text-to-speech (TTS) systems.

Laboratory for Imaging Science and Technology, SNU

Jun. 2023 – Dec. 2023

Research Intern

Supervisor: Jongho Lee

- Conducted research on MR imaging networks for undergraduate thesis.
- Improved Chi-sepnet, an MR imaging network, using unrolling iteration techniques.
- Served as lead intern, managing and mentoring peers new to research.

SUPERTONE Co., Ltd.

Apr. 2022 – Jun. 2023

Research Intern

- Enhanced phoneme classification for singing voices (from 44% to 70%) by refining the encoding model and integrating additional datasets.
- Worked part-time during semesters and full-time during vacations.

Maum AI Inc.

Mar. 2020 – Mar. 2022

Senior AI Scientist

- Led the speech synthesis team, developing TTS architectures for applications like Twitch donations, weather forecasts, and AI Human.
- Enhanced TTS quality and speed, raising MOS from 3.84 to 4.18 (close to ground truth 4.47).
- Developed a robust autoregressive TTS system capable of generating long sentences with a maximum output of 10 minutes of speech.
- Contributed to the company's successful KOSDAQ IPO by authoring research papers and obtaining technical certifications.
- Fulfilled substitute military service from *Mar. 2020 to Feb. 2022*.

PUBLICATIONS

** indicates equal contribution.*

Conference

- Sehun Lee*, **Kang-wook Kim***, Gunhee Kim, "Behaviorally Aware Spoken Dialogue Generation with Large Language Models," *NAACL 2025 (Oral Presentation)*.

- **Kang-wook Kim**, Seung-won Park, Junhyeok Lee, and Myun-chul Joe, "Assem-VC: Realistic Voice Conversion by Assembling Modern Speech Synthesis Techniques," *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 Presentation)*.
- 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*.
- Lugmayr, Andreas, Martin Danelljan, Radu Timofte, **Kang-wook Kim**, Younggeun Kim, Jae-young Lee, Zechao Li et al. "NTIRE 2022 challenge on learning the super-resolution space," *CVPR Workshop 2022*

Demo Track

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

OPEN SOURCE CONTRIBUTIONS

Assem-VC - Voice Conversion System (265 stars): Official repository for our paper, Assem-VC.

UnivNet - Vocoder (265 stars): Reproduced results from the paper; this implementation was ported to the Hugging Face library and is widely used as a baseline in various TTS research papers.

HONORS AND AWARDS

- **Presidential Scholarship (2018 - 2023)**: \$33,000 awarded over 8 semesters. Selected among 120 students nationwide through application and interview. Field: Informatics.
- **Hanseong Sonjaehan Scholarship (2016 - 2017)**: \$11,000 awarded over 2 years. Selected among 180 students nationwide through application and interview.
- **Exemplary Youth Award in Gyeonggi-do (2016)**: Selected as one of 50 students across Gyeonggi Province to receive the Excellence Award for Outstanding Talent. Science and Technology sector.
- **Korea Olympiad in Informatics (KOI): Gold (4th place) in 2015**, Silver in 2014, Bronze in 2011. Achieved 4th place nationally in a competitive programming contest, competing against over 5,100 participants.
- **International Physics Olympiad (IPhO) Winter School**: Completed in 2015, 2016

VOLUNTEER EXPERIENCE

SENS (Society of Engineering Network and Service)

2018 – 2023

Education Volunteer

Seoul, Korea

- Volunteered 155 hours to introduce middle and high school students interested in pursuing engineering to the various fields in engineering and sparked their curiosity about the subject.

Independent Charity Work

2018

Elderly Care Packages Delivery

Gyeonggi, Korea

- Personally delivered care packages to elderly individuals living alone, completing 24 hours of volunteer work.

EXTRACURRICULAR ACTIVITIES

Deepest: Deep Learning Research Group

Mar. 2021 – Feb. 2022

Deep Learning Society, Seoul National University

Seoul, Korea

- Presented paper reviews, delivered multiple talks on the deep learning landscape in speech, and contributed to a team that secured 2nd place in the CVPR NTIRE challenge.
- Conducted support for Season 10 applicants in the speech domain, including screening tests and interview evaluations.