

JUNIK BAE

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EDUCATION

Bachelor of Computer Science and Engineering, **Seoul National University**

2019 - Current

GPA: 4.08 / 4.30 (Overall), 4.09 / 4.30 (Major)

Leave of absence for military service: Feb 2021 - Nov 2022

PUBLICATIONS

- [Exploiting Semantic Reconstruction to Mitigate Hallucinations in Vision-Language Models](#)
Minchan Kim*, Minyeong Kim*, **Junik Bae***, Suhwan Choi, Sungkyung Kim, Buru Chang
European Conference on Computer Vision (ECCV), 2024
- [TLDR: Unsupervised Goal-Conditioned RL via Temporal Distance-Aware Representations](#)
Junik Bae, Kwanyoung Park, Youngwoon Lee
arXiv Preprint arxiv:2407.08464, 2024

AWARDS AND HONORS

- **1st Place, 2022 Military AI Competition** Nov 2022 - Dec 2022
Awarded by Korean Minister of Science and Technology (과학기술부장관상), ₩20,000,000
Preliminary Task: Change detection on buildings in aerial image data
Final Task: Image denoising for all-weather operations
- **2nd Place, 2022 Korean AI Competition** Aug 2022 - Sep 2022
Awarded by Korean Minsiter of Science and Technology (과학기술부장관상), ₩10,000,000
Task: Speech recognition on free, dialect Korean speech datasets
- **2nd Prize, Product Recognition Challenge on Self-service Stand** Sep 2021 - Oct 2021
Awarded by Chairman of Electrical and Computer Engineering Department at SNU
Task: High-precision-and-speed object detection on self-service stand images
- **Semiconductor Track Scholarship** March 2024 - Current
Scholarship from Seoul National University Semiconductor Specialization School
- **Samhwa Jibong Scholarship** March 2023 - Feb 2024
Scholarship from Samhwa Jibong Scholarship Foundation

EXPERIENCE

Research Intern

Jan 2024 - Current

Robot Learning Lab (Advisor: Prof. Youngwoon Lee from Yonsei University)

- Worked on our novel Unsupervised Goal-conditioned RL method, TLDR, which outperforms previous unsupervised RL methods in complex environments including AntMaze.
- Working on a follow-up project of TLDR.

Research Intern

July 2023 - Nov 2023

Vision and Learning Lab (Advisor: Prof. Gunhee Kim, Seoul National University)

- Created a demo 3D meshed face animation using face generation models. Developed scene boundary classification and scene summary generation pipeline using visual video scene segmentation model and ChatGPT used in [MBC broadcast show](#).
- Ideated and developed a lifelong evaluation pipeline for Retrieval-Augmented Generation models with frequently updating text data stream.

Research Intern

Jan 2023 - Feb 2023

Naver Cloud (Formerly Naver Clova) Speech Synthesis & Voice Conversion Team

- Presented a 5-week seminar series titled “[Denoising Diffusion Generative Models and its applications to TTS](#)” to the research team members.
- Implemented a [SOTA TTS model](#) and adapted it for use with proprietary Korean speech data.

Specialty in Software Development

Feb 2021 - Nov 2022

Republic of Korea Air Force

- Focused on developing vision-based detection and segmentation models.

PROJECTS

- **TTS Model Implementation. (450+ stars)** Implemented Microsoft’s [NaturalSpeech: End-to-End Text to Speech Synthesis with Human-Level Quality](#), which is a SOTA model in the LJ Speech Dataset. This is the first and the only public implementation to the best of my knowledge. ([github](#))
- **Open source contribution.** Contributed to [huggingface/transformers](#) by fixing errors in the weights conversion script: [PR #19508](#).