Soohwan **Kim**

AI RESEARCH ENGINEER · SOFTWARE DEVELOPER

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"Toward Human-like A.I."

About Me

I would like to introduce myself as an artificial intelligence research engineer rather than a research scientist. My dream is to create conversational digital humans who people emotionally engage with - so I am very interested in deep learning techniques such as speech recognition, speech synthesis, and open-domain dialogue. Recently I began a startup with 5 co-founding members - all of them were my teammates at Kakao Brain. We named our startup TUNiB. We are looking for talented colleagues to work with. If you are interested, please don't hesitate to contact me.

Work Experience

TUNiB   *Gangnam, Seoul*

CO-FOUNDER, AI RESEARCH ENGINEER   *Mar. 2021 - Present*

- Research and development of artificial intelligence that enables human-like conversation
- Webpage: http://www.tunib.ai/

Kakao Brain   *Pangyo, Gyunggi*

AI RESEARCH ENGINEER   *Nov. 2020 - Feb. 2021*

- Research and development the latest NLP & Speech technology.
- Development of NLP open-source library named PORORO. [link]
- Webpage: https://www.kakaobrain.com/

Internships

Kakao Brain   *Pangyo, Gyunggi*

INTERNSHIP   *Aug. 2020 - Oct. 2020*

- Researched and developed automatic speech recognition technogy. (Wav2vec 2.0) [link]
- Development English, Chinese, and Korean ASR models.
- Webpage: https://www.kakaobrain.com/

Spoken Language Lab   *Mapo, Seoul*

INTERNSHIP   *Apr. 2020 - Aug. 2020*

- Dept. of Computer Science & Engineering Sogang University
- Studied speech recognition technologies based on deep learning algorithm.
- Webpage: https://speech.sogang.ac.kr/

Samsung Multi-Campus   *Gangnam, Seoul*

SHORT-TERM INTERNSHIP   *Jul. 2018 - Aug. 2018*

- Taking software development training using Java and Database
- Won the Outstanding Award among the trainees.
- Webpage: https://www.multicampus.com/

Education

Kwangwoon University   *Seoul, South Korea*

BACHELOR OF ENGINEERING, MAJOR IN ELECTRONIC & COMMUNICATION, MINOR IN DATA SCIENCE   *Mar. 2014 - Feb. 2021*

- **Major GPA** : 3.90 / 4.5, **Total GPA** : 3.67 / 4.5
- **Scholarship** : Samsong Scholarship (2020, 2019), Bima Scholarship (2019-Spring, 2018-Fall, 2018-Spring)
- **Honors** : President's Award, People's Choice Award (Kwangwoon Engineering Festival), Outstanding Award (Multi-Campus), People's Choice Award (Startup Idea Contest), School Representative (SKT 5G-based Convergence Idea Contest)

Competitions

2020   **3rd Ranked,** AI Grand Challenge - Speech Recognition Track (Advisor)   *MSIT*

2019   **Finalist (12th Ranked),** Naver AI Hackathon - Speech (Team Leader)   *Naver*

Project Experience

Open-Domain Dialog System
TUNiB

Team Member
Mar. 2021 - Present

- Research and development of artificial intelligence that enables human-like conversation
- A study on the conversation model that is tailored to the character's characteristics

PORORO: Platform Of neuRal mOdels for natuRal language prOcessing
Kakao Brain

Team Member
Sep. 2020 - Feb. 2021

- Easy to solve various subtasks in the NLP and speech processing field by simply passing the task name. [link]

KoSpeech: Open-Source Toolkit for End-to-End Korean Speech Recognition
Kwangwoon Univ.

Team Leader
Jan. 2020 - Feb. 2021

- Modular and extensible end-to-end Korean automatic speech recognition toolkit [link]

Multilingual Text-To-Speech
Kakao Brain

The person in charge
Oct. 2020 - Feb. 2021

- Development of Kakao Brain's multilingual-TTS technology. [link]

Technical Skills

Language	Python, Java, C, Shell Script, SQL, Android, HTML
Deep Learning	PyTorch, PyTorch-Lightning, Fairseq, Transformers, Parl-AI
Data	Numpy, Pandas, Matplotlib, Torchaudio, Librosa, Sentencepiece
Retrieval	Faiss
OS	OS X, Linux, Windows
Editor	Pycharm, Vim, Vscode, Visial Studio, Eclipse
Collaboration	Git, Slack
Configuration	Hydra, Omegaconf

Extracurricular Activity

Speech Paper Reading
Study

Group Member
Dec. 2020 - Present

- Weekly speech processing paper reading study [link]

NLP Paper Reading
Study

Group Member
Sep. 2020 - Feb. 2021

- Kakao Brain Natural Language Processing Team's weekly paper reading study [link]

Technical Blog
Blog

Writer
Aug. 2018 - Present

- Technical posting of deep learning, programming, signal processing, paper review etc. [link] [link]

Teaching Experience

Samsung AI Expert Course - Speech Recognition
Spoken Language Lab

Teaching assistant
Jul. 2020 - Aug. 2020

- Conducted Teaching Assistant role in the speech recognition session.

Object-Oriented Programming Practice
Kwangwoon University

Teaching assistant
Mar. 2020 - Jun. 2020

- Covered basic JAVA programming, ran laboratories and had office hours every week.

Military Service

ROKMC **Served and discharged from Republic of Korea Marine Corps as Signaller, Sergeant,** 2015.09 - 2017.06

Publication

2021 **Open-Source Toolkit for End-to-End Korean Speech Recognition,** ELSEVIER, SIMPAC, Volume 7, 100054

2020 **KoSpeech: Open-Source Toolkit for End-to-End Korean Speech Recognition,** arXiv, 2009.03092