

# Soohwan Kim

#### ALRESEARCH 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 English, Chinese, and Korean automatic speech recognition technogy. (Wav2vec 2.0) [link]
- 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)
- Internship: Kakao Brain (2020-Fall), Spoken Language Lab (2020-Spring), Multi-Campus (2018-Summer)
- 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**, Al Grand Challenge - Speech Recognition Track (Advisor)

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

MSIT Naver

## **Project Experience**

#### **Open-Domain Dialog System**

**TUNIB** 

Теам Мемвек 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 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

TEAM MEMBER

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**

Python, Java, C, Shell Script, SQL, Android, HTML

**Deep Learning** PyTorch, PyTorch-Lightning, Fairseq, Transformers, Parl-Al

> Data Numpy, Pandas, Matplotlib, Torchaudio, Librosa, Sentencepiece

**Retrieval** Faiss

**OS** OS X, Linux, Windows

**Editor** Pycharm, Vim, Vscode, Visial Studio, Eclipse

Collaboration Git, Slack

**GROUP MEMBER** 

TEACHING ASSISTANT

**TEACHING ASSISTANT** 

**Configuration** Hydra, Omegaconf

### **Extracurricular Activity**

**Speech Paper Reading** Study

Dec. 2020 - Present **GROUP MEMBER** 

· Weekly speech processing paper reading study [link]

**NLP Paper Reading** Studv

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

**Technical Blog** Blog

Aug. 2018 - Present WRITER

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

# **Teaching Experience**

### Samsung AI Expert Course - Speech Recognition

Spoken Language Lab

Sep. 2020 - Feb. 2021

Jul. 2020 - Aug. 2020

• Conducted Teaching Assistant role in the speech recognition session.

### **Object-Oriented Programming Practice**

Kwangwoon University

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**

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

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