TAE HYOUNG **KIM**

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AI Researcher

⊙ Github
🅑 Blog
▶ Youtube
🤗 Huggingface

Skills

ASR
Speech to Text (STT)
Keyword boosting
Multilingual ASR
Speaker Diarization
Audio Classification

Machine Learning
Statistical analysis
Feature engineering
Visualize / Modeling

Brainwave
EEG / EcoG / Spike
Data Acquisition
Experimental design
Preprocessing
Analysis / Modeling

Heart rate variability
ECG / PPG
Preprocessing
Normative Database
Depression / Stress

Education

2019 - 2021	**UNIST,** Brain-Computer Interface Lab (BCILAB)	*Master*
2015 - 2019	**UNIST,** Electronic Engineering, 1st Major Human Factor Engineering, 2nd Major	*Bachelor*

Projects

2023 | **Automatic Speech Recognition (ASR)**
TMAX AI

Developing a Speech-to-text (STT) model using the latest SOTA technology and conducting various technical studies such as Keyword Boosting, Speech Enhancement, Speaker Diarization, which are required for ASR pipelines

2022 | **Prediction model for Depression**
iMediSync

Due to the post-covid, the number of depressed patients increased rapidly, but there were complicated medical diagnosis procedures and manpower shortages. To solve this problem, a model that can perform early-screaring with simple EEG measurement was developed. This study was registered in the journal Frontiers in Psychiatry in 2022.

2021 | **Denoising Algorithm for HRV**
iMediSync
Denoising algorithm for ECG and PPG signal based on Pan-tompkin algorithm. This was adopted as a standard denoising algorithm for over 1,300 data in the company.

Languages

Korean	native
English	● ● ●

Programming

.py
Pytorch

.m
MATLAB

.r
R

.cpp
C++

Hobbies

Piano

Cooking

Drum

Weight

Research Experience

2022 - Now	**Tmax AI** Speech Team	*AI Researcher*
2021 - 2022	**iMediSync** AI Research Team	*ML Researcher*
2019 - 2021	**UNIST** Brain-Computer Interface Lab (BCILAB)	*Graduate student*
2018 - 2019	**UNIST** Brain-Computer Interface Lab (BCILAB)	*Research intern*
2017 - 2018	**SNU** Music and Audio Research Group (MARG)	*Research intern*

International Conference and Exhibition

2022   *VA NAII BRAIN SUMMIT*, Washington D.C.

2022   *CES Show*, Las Vegas.

2019   *Society for Neuroscience (SfN)*, Chicago.

Publication (SCI / SCIE)

2023   **Cortical representation of musical pitch in event-related potentials**
BIOMEDICAL ENGINEERING LETTERS
Accepted

2022   **Decoding Imagined Musical Pitch from Human Scalp Electroencephalogram**
IEEE TNSRE
Accepted

2022   **Prediction model for Depression using sex and age-matched EEG biomarker**
FRONTIERS IN PSYCHIATRY
Accepted