Yoo Hwan **Kwon**

MS Candidate · Electrical & Electronic Engineering

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Interests

Speech Signal Processing Speaker recognition, Speaker diarization

Deep Learning Representation learning, Disentanglement, Style transfer

Education

Yonsei University

Seoul, Korea

M.S. in Electrical Electronic Engineering

Mar. 2019 - Present

- Digital Signal Processing & Artificial Intelligence (DSP&AI) Lab.(Prof. Hong-Goo Kang)
- Major : Speech signal processing, Deep learning

University of Seoul

Seoul, Korea

B.S. in Electrical Computer Engineering

Mar. 2011 - Feb. 2017

- GPA : 3.96 / 4.5
- Half-tuition Scholarship for academic excellence (Spring,2015)
- Full-tuition Scholarship for academic excellence (Fall,2015)

Work Experience

Naver Corperation

Gyeonggi-do, Korea

Research Intern

July. 2020 - Oct. 2020

- Clova AI. Speech team
- Research on speaker representation
- Research on voice conversion based on representation disentanglement

Hyundai Motors

Gyeonggi-do, Korea

Researcher, Project Manager department

Feb. 2017 - June. 2018

- Participate in development project of the mid-size sedan
- Overall Project Management - Collaborate with R&D departments

Republic of Korea Army Military

Gyeonggi-do, Korea

In 59 artillery battalion, 1st Infantry Division

Jan. 2012 - Oct. 2013

- Army Sgt. Expired

Paper

Intra-class variation reduction of speaker representation in disentanglement framework

INTERSPEECH, 2020

Yoohwan Kwon, Soo-Whan Chung, Hong-Goo Kang

- Effective learning criteria for speaker embedding
- Disentanglement method for effective speaker embedding

Cross attentive pooling for speaker verification

SLT Workshop, 2020, submitted

Seongmin Kye, **Yoohwan Kwon**, Joon Son Chung

- Pooling method for speaker verification
- Attentive pooling method using correlation between support and query

Learning in your voice: Non-parallel voice conversion based on speaker consistency loss

ICASSP, 2021, submitted

Yoohwan Kwon,Soo-Whan Chung, Hee-Soo Heo, Hong-Goo Kang

- Voice conversion strategy using speaker consistency loss
- Improved information bottleneck method based attention for disentanglement
- Demo site: yoohwankwon.github.io/Learning_in_your_voice/

The ins and outs of speaker recognition: lessons from VoxSRC 2020 *ICASSP, 2021, submitted*

Yoohwan Kwon*,Hee-Soo Heo*, Bong-Jin Lee, Joon Son Chung

- Description of speaker recognition system which submit to Voxceleb Speaker Recognition Challenge(VoxSRC)2020
- Analysis of effect and performance of system

Look who's talking: active speaker detection in the wild *ICASSP, 2021, submitted*

ou Jin Kim, Hee-Soo Heo, So Yeon Choe, Soo-Whan Chung, **Yoohwan Kwon**, Bong-Jin Lee, Youngki Kwon, Joon Son Chung

- Audio-Visual dataset for active speaker detection

Project & Activity

Epidermal Skin-attachment-type Ultrasensitive Strain Sensor Array and Deep-Learning-based Strain-to-Word Conversion Algorithm for Silent Communication *SAMSUNG ELECTRONICS*

Speech Recognition for strain signals *April. 2020 - July. 2020*

- Research on strain signal processing and word recognition system
- Implementation Lip-Reading system for row-resolution signal processing

Deep learning-based Audio-Visual Speech Separation Algorithm using Multi-modal information *NAVER Corp.*

Audio only Speaker Recognition and Diarization *April. 2019 - Dec. 2019*

- Research on audio-visual feature extraction
- Research on audio-only/audio-visual source separation
- Implement speaker diarization system using speaker representation

Assistant instructor of Deep learning Network intelligence *SAMSUNG ELECTRONICS*

Basic algorithm of deep learning *May. 2019 - May. 2019*

- Give a lecture on basic machine learning algorithm and its applications

Development of low-end realtime detector for indoor radon diagnosis and monitoring *KEITI*

Software Modules for Diagnosis and network system *July. 2016 - Dec. 2016*

- Implement radon diagnosis system using CMOS sensor
- Implement network system for monitoring

Skills

Programming	Python, C/C++, MATLAB
Deep Learning Tools	Pytorch, Tensorflow
Languages	Korean - Native level
	English - Conversational level