

Min Jung. Shin

Seoul, Rep. of KOREA

✉ smj139052@naver.com | 📱 minjung-s



Education

Yonsei University

DEPARTMENT OF ARTIFICIAL INTELLIGENCE

- Master Degree

Exp. Mar. 2021

Seoul, S.Korea

Kwangwoon University

MAJOR IN ELECTRONICS & COMMUNICATIONS ENGINEERING

- Major GPA of 4.14/4.5
- Total GPA of 4.00/4.5

Mar. 2016 - Exp. Feb. 2021

Seoul, S.Korea

Work Experience

Electronics and Telecommunications Research Institute(ETRI)

ARTIFICIAL INTELLIGENCE RESEARCH LABORATORY

INTELLIGENT ROBOTICS ULSAN RESEARCH SECTION OF INTELLIGENT ROBOTICS RESEARCH DIVISION

- Implemented DORE-MTCNN (Tensorflow version1)
- Preprocessed image data and reviewed face detection model paper

Intern

Jan. 2019 - Feb.2019

Publication

Detectable Object-Sizes Range Estimation Based Multi-Task Cascaded Convolutional Neural Networks in the Vehicle Environment

3rd Author

2019 IEEE 90TH VEHICULAR TECHNOLOGY CONFERENCE (VTC 2019-FALL)

- Propose the Detectable Object-sizes Range Estimation algorithm (DORE) to estimate the range of detectable face sizes through specific information in the vehicle environment.
- Achieve half of the processing time (MTCNN: about 32ms / DORE-MTCNN: about 16 ms) with the same accuracy (95.98% on the basis of the NTHU-DDD dataset) compared to MTCNN.

Research Intetest

Generative Model

CREATE A NEW DATA USING DEEP GENERATIVE MODEL

- A research on the image&video generation
- A research on the transformer in vision
- A research on the disentanglement

Skills

Programming C, Python, Verilog, Assembly

Deep Learning Tensorflow, Keras, Pytorch

Data Analysis Numpy, Pandas, Matplotlib, seaborn, scikit-learn

Platform Jetson TX2, Jetson Xavier, ARTIK, Raspberry-Pi, DE1-SoC, Arduino

Project Experience

Image to Video Generation

Oct. 2020 - Jan.2020

OVERVIEW

- Generate an image of the desired style based on the user's face image using network blending. (image2image translation based StyleGAN)
- Generate a video that moves the generated image to the desired condition.(image2video)

ROLES & RESPONSIBILITIES

- Project Manager
- Designed and implemented new image2video model (Pytorch)

Home-shopping Sales Prediction

Aug. 2020 - Sep. 2020

OVERVIEW

- Predict future sales with home-shopping data for one year in 2019 and external data such as weather, economic index, etc.
- Achieved RMSE score 23 with CV based stacking model

ROLES & RESPONSIBILITIES

- Feature engineering about NLP
- Implemented deep learning stacking model & Auto-encoder for recommendation system

Emotional Voice Conversion using GAN

Mar. 2020 - Jul. 2020

OVERVIEW

- Generate a new voice by selecting the target emotion and degree for the target emotion
- By extracting the fundamental frequency and spectral envelop of voice data, train multi domain and interpolation with RelGAN

ROLES & RESPONSIBILITIES

- Preprocessed speech data
- Implemented a model that applies WORLD vocoder and CycleGAN VC2 to AttGAN and RelGAN (Tensorflow version 1)

Driver Drowsiness Detection using Video and PPG-sensor

Aug. 2019 - Jun. 2020

OVERVIEW

- Detecte driver drowsiness condition by video and biometric signals in real time
- Detecte driver face using MTCNN&KCF-tracker and estimate pose using Alpha-pose in real time
- Extract PPG signal through serial communications with Ubpulse360

ROLES & RESPONSIBILITIES

- Team Leader & Main Coder
- Implemented detection model of the driver's face with the MTCNN and used the KCF tracker for frame with no object detected
- Designed and implemented a multi-modal deep learning model (Tensorflow version 2)

Super Resolution

Jun. 2020

OVERVIEW

- Shallow CNN-based super resolution using Sub-pixel convolution layer without using GAN for fast training and fast inference time
- Implement total architecture by Tensorflow version 2

Side Projects

AUTHOR

- Smart Signal Lamp System using Object Detection(YOLO) -2019 Summer
- Fire Notification System using MOSFET and Raspberry-PI -2019 Fall
- Frequency Harmonic Generator with Digital Logic Circuit -2018 Spring
- Console Rhythm game by C++ - -2017 Spring

Awards & Honors

AWARD

- 2018 **Finalist**, 10th Engineering Design Camp - Control of Drone
- 2017 **Incentive Award**, Portfolio Competition

S.Korea
Kwangwoon Univ

HONORS

2020	Academic Scholarship , awarded from KB to students with high achievements throughout the total GPA	<i>S.Korea</i>
2019	Academic Scholarship , awarded to students with high achievements throughout the semester	<i>Kwangwoon Univ</i>
2018	Academic Scholarship , awarded to students with high achievements throughout the semester	<i>Kwangwoon Univ</i>
2017	Academic Scholarship , awarded to students with high achievements throughout the semester	<i>Kwangwoon Univ</i>

Extracurricular Activity

Google Machine Learning Bootcamp

Oct. 2020 - Jan. 2021

MEMBER

- Complete Andrew Ng's class and study about Cloud Server.

Generative Model Seminar

Sep. 2020 - Dec. 2020

SEMINAR LEADER

- Study about VAE, GAN, self-supervised learning, few-shot, etc.

Big data & AI study club "Tobigs"

Jan. 2020 - PRESENT

13TH MEMBER

- Study about Machine learning & Deep learning

DITTO

Mar. 2016 - Feb. 2017

MEMBER

- Programming club of the department of electronics & communications engineering, Kwang-Woon university