

Ikhee Shin

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EDUCATION

University of Michigan

M.S. Electrical and Computer Engineering

Ann Arbor, MI

Aug. 2021 – May 2023

Yonsei University

B.S. Electrical and Electronic Engineering

Seoul, Korea

Mar. 2013 – Aug. 2019

WORK EXPERIENCE

Samsung Research

Research Engineer, Natural Language Processing Lab

Seoul, Korea

Aug. 2019 – July 2021

- **On-device Natural Language Understanding Service** | *C++, Java, Python, TensorFlow*
 - * Built the C++ based app for Samsung Research's on-device natural language understanding service
 - * Developed the on-device model preparation pipeline for quantized model and model resources
 - * Cooperated with the overseas branch of Samsung Research (America) to train and compress models for Korean and English languages
- **Dialogue State Tracking Research and Development** | *Python, Keras, Flask*
 - * Designed the baseline pre-processing and training code for experiments with span-based dialogue state tracking models
 - * Applied data augmentation and multi-task learning techniques to overcome data sparsity problems

NAVER Co.

Clova Machine Learning Intern, NAVER Clova AI Research

Seongnam, Korea

July 2018 – Aug. 2018

- **Animation Character Recommendation System** | *Python, PyTorch, Flask*
 - * Modeled application that extracts face attributes from images and recommends an animated character with similar attributes
 - * Implemented the state-of-the-art multi-label classification models and metric learning such as contrastive and triplet for face attributes classification

NAVER Co.

Clova Multimedia Intern, NAVER Clova AI Research

Seongnam, Korea

Jan. 2018 – June 2018

- **Text-to-Video Development** | *Python, PyTorch*
 - * Developed the baseline pre-processing and training code for the text-to-video model
 - * Implemented the state-of-the-art models such as Obamanet and applied it to internal data

Republic of Korea Air Force

Sergeant, Ground Operation Center

Seosan, Korea

Feb. 2014 – Feb. 2016

- Cooperated with Air Defense Artillery to protect the force and selected geopolitical assets from aerial attack

RESEARCH EXPERIENCE

Digital Signal Processing and Artificial Intelligence Lab, Yonsei University

Undergraduate Research Assistant (Advisor: Professor Hong-Goo Kang)

Seoul, Korea

Sept. 2018 – Dec. 2018

- Implemented music source separation based on U-Net style architecture, followed by improving the model by utilizing self/cross attention

Multimedia Security Lab, Yonsei University

Undergraduate Research Assistant (Advisor: Professor Andrew Beng Jin Teoh)

Seoul, Korea

Aug. 2017 – Jan. 2018

- Developed the baseline training code for experiments with training varied generated models (e.g. GAN, VAE) for image generation
- Applied GAN to semi-supervised training to train the classification model with fewer data

TECHNICAL SKILLS

Languages: Python, C/C++, Java

Libraries: TensorFlow, Keras, PyTorch

Frameworks: Flask, JMeter