Ikhee Shin

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EDUCATION

University of Michigan — Ann Arbor, MI
M.S. Electrical and Computer Engineering — *Aug. 2021 – Dec. 2022*

Yonsei University — Seoul, South Korea
B.S. Electrical and Electronic Engineering — *Mar. 2013 – Aug. 2019*

WORK EXPERIENCE

Cohere Inc. — Palo Alto, CA
Machine Learning Engineer Intern — *Sept. 2022 – Dec. 2022*
- **Large-Scale Language Model Development** | *Python, JAX*
  * Developed the large-scale language model

Snap Inc. — Santa Monica, CA
Machine Learning Engineer Intern, Camera Platform team — *May 2022 – Aug. 2022*
- **Segmentation Model Development** | *Python, PyTorch*
  * Developed the face segmentation model used in the Lens Studio of Snapchat

Samsung Research — Seoul, South Korea
Engineer, Natural Language Processing Lab — *Aug. 2019 – July 2021*
- **On-device Natural Language Understanding Service** | *C++, Python, TensorFlow*
  * Built the C++ based app for Samsung Research's on-device natural language understanding service for Bixby, a virtual assistant with more than 10 million active users
  * Developed the automatic on-device model preparation pipeline for quantized model and model resources
  * Decreased the latency of the BERT model by 40% by applying sequence slicing
- **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, reaching joint accuracy 70% in internal test data
  * Applied data augmentation and multi-task learning techniques to overcome data sparsity problems, improving the joint accuracy by 5%

NAVER Co. — Seongnam, South Korea
Clova Machine Learning Intern, Clova AI Research — *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
  * Improved the classification accuracy by 3%, sharing a fully connected layer among attributes with correlation

Clova Multimedia Intern, Clova AI Research — *Jan. 2018 – June 2018*
- **Text-to-Video Development** | *Python, PyTorch*
  * Devised the baseline pre-processing and training code for the text-to-video model
  * Implemented the state-of-the-art models such as Obamanet

Republic of Korea Air Force — Seosan, South Korea
Sergeant, Ground Operation Center — *Feb. 2014 – Feb. 2016*
- Cooperated with Air Defense Artillery to protect the force and selected geopolitical assets from an aerial attack

RESEARCH EXPERIENCE

Situated Language and Embodied Dialogue Lab, *University of Michigan* — Ann Arbor, MI
Graduate Research Assistant (Advisor: Professor Joyce Y. Chai) — *Jan. 2022 – Apr. 2022*
- Developed a dialogue system for the guide robot in the building of the University of Michigan

Digital Signal Processing and Artificial Intelligence Lab, *Yonsei University* — Seoul, South Korea
Undergraduate Research Assistant (Advisor: Professor Hong-Goo Kang) — *Sept. 2018 – Dec. 2018*
- Engineered music source separation based on U-Net style architecture, followed by improving the accuracy of the model by 2% by utilizing self/cross attention

Multimedia Security Lab, *Yonsei University* — Seoul, South Korea
Undergraduate Research Assistant (Advisor: Professor Andrew Beng Jin Teoh) — *Aug. 2017 – Jan. 2018*
- Applied GAN to semi-supervised training to train the classification model with 10 times fewer data