

# Ikhee Shin

+1 734-545-2782 | [ikhee@umich.edu](mailto:ikhee@umich.edu) | [linkedin.com/in/ikhee](https://www.linkedin.com/in/ikhee)

## INTERESTS

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Natural Language Processing, Computer Vision, Signal Processing, Machine Learning, Deep Learning

## EDUCATION

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<b>University of Michigan</b> <i>M.S. Electrical and Computer Engineering</i>	Aug. 2021 – May 2023 (expected) Ann Arbor, MI
<b>Yonsei University</b> <i>B.S. Electrical and Electronic Engineering</i>	Mar. 2013 – Aug. 2019 Seoul, Korea

## WORK EXPERIENCE

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<b>Samsung Research</b> <i>Research Engineer, Natural Language Processing Lab</i>	Aug. 2019 – July 2021 Seoul, Korea
<ul style="list-style-type: none"><li>• <b>On-device Natural Language Understanding Service</b>   <i>C++, Java, Python, TensorFlow</i><ul style="list-style-type: none"><li>* Developed the C++ based app for Samsung Research's on-device natural language understanding service</li><li>* Developed the on-device model preparation pipeline for quantized model and model resources</li><li>* Cooperated with the overseas branch of Samsung Research (America) to train and compress models for two languages (e.g. Korean, English)</li></ul></li><li>• <b>Dialogue State Tracking Research and Development</b>   <i>Python, Keras, Flask</i><ul style="list-style-type: none"><li>* Developed the baseline pre-processing and training code for experiments with span-based dialogue state tracking models</li><li>* Applied data augmentation and multi-task learning techniques to overcome data sparsity problems</li><li>* Maintained and co-designed data format and data collection strategy</li></ul></li></ul>	
<b>NAVER Co.</b> <i>Clova Machine Learning Intern, NAVER Clova AI Research</i>	July 2018 – Aug. 2018 Seongnam, Korea
<ul style="list-style-type: none"><li>• <b>Animation Character Recommendation System</b>   <i>Python, PyTorch, Flask</i><ul style="list-style-type: none"><li>* Developed the app that given face images, extracts face attributes, and recommends animation character with common attributes</li><li>* Implemented the state-of-the-art multi-label classification models and metric learning (e.g. contrastive, triplet) for face attributes classification</li></ul></li></ul>	
<b>NAVER Co.</b> <i>Clova Multimedia Intern, NAVER Clova AI Research</i>	Jan. 2018 – June 2018 Seongnam, Korea
<ul style="list-style-type: none"><li>• <b>Text-to-Video Development</b>   <i>Python, PyTorch</i><ul style="list-style-type: none"><li>* Developed the baseline pre-processing and training code for the text-to-video model</li><li>* Implemented the state-of-the-art models (e.g. Obamanet) and applied it to internal data</li></ul></li></ul>	
<b>Republic of Korea Air Force</b> <i>Sergeant, Ground Operation Center</i>	Feb. 2014 – Feb. 2016 Seosan, Korea

## RESEARCH EXPERIENCE

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<b>Digital Signal Processing and Artificial Intelligence Lab, Yonsei University</b> <i>Undergraduate Research Assistant (Advisor: Professor Hong-Goo Kang)</i>	Sept. 2018 – Dec. 2018 Seoul, Korea
<ul style="list-style-type: none"><li>• Implemented music source separation based on U-Net style architecture, followed by improving the model by utilizing self/cross attention</li></ul>	
<b>Multimedia Security Lab, Yonsei University</b> <i>Undergraduate Research Assistant (Advisor: Professor Andrew Beng Jin Teoh)</i>	Aug. 2017 – Jan. 2018 Seoul, Korea
<ul style="list-style-type: none"><li>• Developed the baseline training code for experiments with training varied generated models (e.g. GAN, VAE) for image generation</li><li>• Applied semi-supervised approach to training GAN</li></ul>	

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, Java  
**Libraries:** TensorFlow, Keras, PyTorch  
**Frameworks:** Flask, JMeter