

EDUCATION

- **University of Massachusetts Lowell** Lowell, MA
Ph.D. in Computer Science 2020 ~ currently
- **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, South Korea
B.S. in Computer Science 2016 ~ 2020
Interdisciplinary Minor: Industrial, Electrical Engineering and Math

EXPERIENCE

- **NAVER Clova** Seongnam, Korea
ML Research Intern Sep 2020 - Jan 2021
 - Spoken Language Understanding (SLU).
- **Humelo** Seoul, Korea
ML Research Intern June 2019 - May 2020
 - Lead the research project on emotion conversion.
 - A method based on unsupervised disentangled representation. Inspired by beta-VAE and Info-GAN.
 - Overcame the shortcomings of previous methods by separating speaker-level and emotion-level features.
 - Achieved multi-speaker, many-to-many emotion conversion, while maintaining speaker identity.
 - Set up and conducted Mturk survey.
 - Reference Paper: Wei-Ning Hsu, Yu Zhang, and James Glass, *Unsupervised Learning of Disentangled and Interpretable Representations from Sequential Data*, NIPS 2017
- **Crazing Lab** Seoul, Korea
ML Engineering Intern June 2018 - Aug 2018
 - Created a pipeline for data collection and annotation.
 - Created a model for real-time human and body parts tracking using RGB&Depth sensors.
 - Integrated Realsense depth sensor API, OpenCV, and used image registration between the two inputs.
 - Modified the darknet framework to accept 16-bit depth maps and to accept RGB and depth inputs at different depths of the network.
 - Reference Paper: Joseph Redmon, Ali Farhadi, *YOLO9000/YOLOv3*, CVPR 2017

PUBLICATIONS

- Mohamed Elgaar, Jungbae Park, Sang Wan Lee, **Multi-Speaker and Multi-Domain Emotional Voice Conversion Using Factorized Hierarchical Variational Autoencoder**, IEEE ICASSP 2020

PATENTS

- Mohamed Elgaar, Jungbae Park, **Methods for Emotional Voice Conversion**, Korean patent (10-2277205)

AWARDS

- KAIST College of Engineering Innovator Award (2020)

SKILLS

- **Programming Languages:**
 - **Proficient:** Python, C, Prolog
 - **Intermediate:** R, Matlab, Scala, Java, C++, Flutter
- **Technologies:** Pytorch, Tensorflow, NLTK, Linux Programming, CUDA Programming, OpenCV, AWS, Google Cloud Platform, git, SQL