Dongyeun Lee

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Education

- **Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, South Korea
  M.S. - School of Electrical Engineering (Advisor: Prof. Junmo Kim) — *Mar. 2021 - Aug. 2022*
- **Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, South Korea
  B.S. - School of Computing — *Mar. 2016 - Feb. 2021*

Experience

- **Klleon AI Research** — Seoul, South Korea
  AI Researcher (Alternative military service). Worked on a virtual human avatar. — *May 2022 - Current*
- **Vision and Learning Laboratory, KAIST** — Daejeon, South Korea
  Research Intern. Worked on GAN-based Makeup Style Transfer project. — *Jan. 2020 - Jun. 2020*
- **Dabeeo** — Seoul, South Korea
  Research Intern. Worked on Arial Image Change Detection and Object Detection. — *Apr. 2019 - Aug. 2019*

Publications

- **RADIO: Reference-Agnostic Dubbing Video Synthesis** — WACV 2024
  Dongyeun Lee, Chaewon Kim*, Sangjoon Yu, Jaejun Yoo†, Gyeong-Moon Park†*
- **Training Cartoonization Networks without Cartoon** — ICIP 2023
  *Doyeon Kim, **Dongyeun Lee**, Donggyu Joo, Junmo Kim*
- **Fix the Noise: Disentangling Source Feature for Controllable Domain Translation** — CVPR 2023
  ***Dongyeun Lee**, Jae Young Lee, Doyeon Kim, Jaehyun Choi, Jaejun Yoo, Junmo Kim*
- **Fix the Noise: Disentangling Source Feature for Transfer Learning of StyleGAN** — CVPRW 2022
  ***Dongyeun Lee**, Jae Young Lee, Doyeon Kim, Jaehyun Choi, Junmo Kim* — *Best Paper Award*

Selected Projects

- **Explicit Controllable 3D-Aware Talking Head Synthesis**: Implement 3D parametric model guided 3D-Aware Talking Head framework. Tech: Python, Pytorch, Pytorch3D, FLAME. **Klleon AI Research**. (Apr. 2022 - Current)
- **High-Fidelity Audio Driven Talking Head Synthesis**: Led the development of core Lip-Sync pipeline including problem design, data collection, pre-processing, and ML model training and result deployment. Tech: Python, Pytorch. **Klleon AI Research**. (May 2022 - Mar. 2023) **Applied product:** Chat-Avatar, Klone Studio.
- **Photo-Realistic Sign Language Generation**: Framework that consists of Text→Pose & Pose→Photo-Realistic. A full cycle project that includes data collection, pre-processing, ML model training, and evaluation. Utilized OpenPose to extract facial landmarks and pose. Tech: Python, Pytorch, OpenPose. **KAIST**. (Mar. 2021 - Jun. 2021)
  Acknowledgement: Non-Autoregressive Sign Language Production with Gaussian Space (BMVC 2021).
- **Hangul Font Generation**: Service that produces a custom Hangul font from random sentences without labels written on squared manuscript papers. A full pipeline that includes raw data pre-processing, OCR, and ML model. Tech: Python, Pytorch. **KAIST**. (Sep. 2020 - Dec. 2020)
- **Makeup Style Transfer**: Train and improve ML model for Makeup Style Transfer by leveraging SOTA models and methods. Tech: Python, Pytorch. **Vision and Learning Laboratory, KAIST**. (Jan. 2020 - Jun. 2020)
- **News Stream Data Analysis**: Detect and analyze top-k leading events in a stream of news. Experience in extracting meaningful information from raw text data. Tech: Python, Keras, NLTK. **KAIST**. (Sep. 2019 - Dec. 2019)
- **Deepfake Detection Framework**: Project that provides basic pre-trained models and datasets for Deepfake Detection. Tech: Python, Keras. **KAIST**. (Sep. 2019 - Dec. 2019)
- **M2Det Implementation**: Reproduce Object Detection framework. Tech: Python, Keras. (Aug. 2019 - Aug. 2019)
- **Arial image Change Detection and Object Detection**: Full cycle project including problem design, data collection and preprocessing, ML model training, and result deployment. Tech: Python, Keras. **Dabeeo**. (Apr. 2019 - Aug. 2019)

Skills Summary

- **Languages**: **Python**, Bash, C, JAVA
- **Frameworks**: **Pytorch**, Pytorch3D, TensorFlow, Keras, OpenCV, Scikit, Librosa, NLTK, Pandas
- **Tools**: Git, Docker
- **Basic Knowledge**: R, Node.js, JavaScript, MongoDB, mySQL, Scala, Kotlin, C++

Honors and Awards

- Best Paper Award, CVPR 2022 Workshops on AI for Content Creation, 1500$ Sponsored by Google.