Gyutak Hahn

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Github | Website
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RESEARCH INTERESTS

Deep learning, Generative model, Computer Vision, 3D Vision, Multi-modal learning

EDUCATION

•**Sejong University**   *Feb. 2019 – Present*

B.S. *in Intelligent Mechatronics Engineering ; GPA: 4.24/4.5*   Seoul, Repubilc of Korea

PUBLISHED

- S.H. Pak, **G.T. Hahn**, S. Lee, H.S. Kim, "StarGAN-TA : StarGAN with Transfer Learning for Improved Facial Expression Generation Perfomance", ICROS, (2023)

RESEARCH EXPERIENCES

•**Undergraduate Student at MINES Lab**   *Jan 2023 - Dec. 2023*

MINES Lab, Hyung Seok Kim   Seoul

- Research on image synthesis using transfer learning and GANs
- Research on audio data augmentation and speech synthesis based on Diffusion

PROJECT EXPERIENCES

•**Face Recognition Elevator @ Smarcle**   *Aug. 2022*

Elevator embedded system operated by face recognition   Github

- Connecting facial & voice recognition AI with applications
- Devising an efficient elevator algorithm using artificial intelligence and applying it to Arduino coding

•**StarGAN-TA @ MINES Lab**   *Jan. 2023 - Jun. 2023*

StarGAN with Transfer Learning for Improved Facial Expression Generation Perfomanc   Github

- Improve performance with fine-tuning, activation function changes, and more

•**Lenfit : AI Diet Assistant App @ 2023 Hanium ICT Mentoring**   *Mar. 2023 - Nov. 2023*

AI-based app that tracks your movements to help user improve training   Gitlab

- Estimating Exercise Performance Using Pose Estimation
- Lead the overall structure of how data communicates and works in the app.

•**Develop a Fashion outfit Recommendation Service**   *Jun. 2023 - Sep. 2023*

Fashion recommendation service using LLM model, image generation model, and segmentation model   Github

- Developing a semetic segmentation model using the Deeofashion2 dataset
- Visualize outfit recommendations using image-generating AI

•**Development of Speech Conversion System**   *Jul. 2023 - Dec. 2023*

Apps with speech synthesis artificial intelligence models developed on Diffusion

- Research on data augmentation with Diff-Wave
- Research on voice conversion using Diff-SVC

•**RESTED : AI Self-rehabilitation Therapy Assistant**   *Oct. 2023 - Dec. 2023*

Self-rehabilitation services with object detection, generative AI, hand gesture recognition models, and more   Github

- Proactively develop the various AI model
- Building cognitive rehabilitation with object detection and GANs

HONORS AND AWARDS

- **4th Prize**, SW Coding Contest, Sejong University, Korea   *2019*
- **Grand Prize**, Algorithm competitions, Smarcle   *2022*
- **Selected**, Hanium ICT Mentoring   *2023*
- **Grand Prize**, 16th Annual Creative Design Competition, Sejong Univ   *2023*

TEACHING EXPERIENCES

- **Sejong University**, Lecture Teaching Assistant

  – C programming (2022-2024)
  – Data Structure (2023)
  – Algorithm (2023)

- **Mentoring Project**, Mentor

  – C programming (2022)
  – Machine Learning (2024)

SKILLS

- **Programming**: Python, C

- **Tools/Frameworks**: Deep Learning Framework(Pytorch, Tensorflow, Keras), Libraries(OpenCV, Scikit-Learn, etc), Shell Script, Git, Latex

KEY COURSES TAKEN

- **Mathematics**: Linear Algebra, Basic Calculus, Discrete Maths, Probability & Statistics

- **Computer Science**: Operating System, Computer Structure

- **AI**: Machine Learning, Deep Learning, Machine Vision

EXTRA CURRICULARS

- **Cadet**, 42 Seoul   *Jul. 2022 - Mar. 2023*

  – Exploring Computer Science and Structure with C, C++, and Shell

- **LG Aimers**, LG   *Jul. 2023 - Aug. 2023*

  – Dive deeper into AI and explore different fields

- **NAVER AI RUSH**, Naver   *Aug. 2023 - Nov. 2023*

  – Leading projects with Hyperclova X