Jiwoo Chung

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Research Interests

Computer Vision, **Generative Models (GANs, Diffusion Models, ...)**

- Image & Video Editing, Generative Model Compression
- Current: Multi-View Image Generation & Editing

Education

2024 – present   🔖 **Ph.D in Artificial Intelligence** in Sungkyunkwan University (SKKU).

2022 – 2024   🔖 **M.S in Artificial Intelligence** in Sungkyunkwan University (SKKU).
Thesis title: *Diversity-aware Channel Pruning for StyleGAN Compression*
GPA: 4.2 / 4.5

2016 – 2022   🔖 **B.S in Computer Science and Engineering** in Sungkyunkwan University (SKKU).
GPA: 4.05 / 4.5, C.S.: 4.26 / 4.5
Honors: *SKKU Magna Cum Laude*

Research Publications

Conference Proceedings

1. **J. Chung**, S. Hyun, and J.-P. Heo, "Style injection in diffusion: A training-free approach for adapting large-scale diffusion models for style transfer," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Highlight, 2024, pp. 8795–8805.

2. **J. Chung**, S. Hyun, S.-H. Shim, and J.-P. Heo, "Diversity-aware channel pruning for stylegan compression," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024, pp. 7902–7911.

3. S.-H. Shim, **J. Chung**, and J.-P. Heo, "Towards squeezing-averse virtual try-on via sequential deformation," in *Proceedings of the AAAI Conference on Artificial Intelligence*, vol. 38, 2024, pp. 4856–4863.

Journal Articles

1. S. Hyun, J. Lew, **J. Chung**, E. Kim, and J.-P. Heo, "Frequency-based motion representation for video generative adversarial networks," *IEEE Transactions on Image Processing (TIP)*, 2023.

2. **J. Chung** and J.-P. Heo, "Semantic consistency for optimization-based gan inversion," *The 65th Annual Scientific Meeting of The Korean Society of Cardiology (KSC)*, pp. 1419–1421, 2021, Best Paper Award in Undergraduate/Junior Paper Competition.

Experience

2021 – present   **Visual Computing Lab** in Sungkyunkwan University (SKKU).
Advised by Jae-Pil Heo. Research on Generative Models.

2018 – 2020   **Web Developer** in Inswave Systems Co., Ltd.
Served as an Industrial Technical Personnel during military service
- Developed WebSquare, an HTML5-based UI/UX solution.

Research Projects

2022 – present   **Detection of AI-based Fake Investigation and Tip Videos (PoliceLab 2.0)**
Korean National Police Agency
- Developed research for object (person) insertion manipulation scenario
- Developed interactive web demo

2021 – 2022   **5G-based Cultural Project Communication Platform**
Electronics and Telecommunications Research Institute (ETRI)
- Developed video generation using conditional GANs with virtual try-on image inputs

Awards and Honers

2021   **AI Grand Challenge (IITP), Award in Top 20.**
- Solving Text-based Mathematics Problems

2016 – 2022   **Sungkyun Software Scholarships**
- Full tuition

Skills

Programming Languages   Python, JavaScript, C/C++
Framework   Pytorch, Docker