Joonghyuk Shin

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EDUCATION

Seoul National University, Seoul, Republic of Korea

- Combined M.S. and Ph.D. in Dept. of Computer Science and Engineering — Sep 2023 – Present
  - Adviser: Professor Jaesik Park
  - Interest: Generative modeling and its applications (Diffusion, GAN)

POSTECH, Pohang, Republic of Korea

- M.S. in Dept. of Computer Science and Engineering — Feb 2023 – Aug 2023
  - Computer Vision Laboratory, Adviser: Professor Jaesik Park
  - Interest: Generative Models (Diffusion, GAN), Long-tailed Recognition
- B.S. in Dept. of Computer Science and Engineering — Feb 2019 – Feb 2023
  - Adviser: Professor Jaesik Park
  - Summa Cum Laude (GPA: 3.97/4.3)

Korean Minjok Leadership Academy, Hoengseong, Republic of Korea

- High School — Feb 2016 – Feb 2019

RESEARCH PROJECTS

Computer Vision Laboratory, Pohang, Republic of Korea

- Fill-Up project — Sep 2022 – Jun 2023
  - Proposed a framework to balance long-tailed data with generative models
  - Worked with Minguk Kang and Jaesik Park
- StudioGAN project — Jun 2021 – Apr 2023
  - Built StudioGAN platform for reproducible and fair evaluation of GANs
  - Worked with Minguk Kang and Jaesik Park
  - Received 3200+ GitHub stars

POSTECH, Pohang, Republic of Korea

- Graduation Project (I, II) — Sep 2021 – Dec 2022
  - Large scale generative model as a data source for vision tasks (II)
  - Improving GAN training via techniques used in representation and metric learning (I)
  - Project II selected as Best Graduation Project of POSTECH CSE 2022
- Neural Point Cloud Rendering of POSTECH — Apr 2020 – Dec 2020
  - Built large point cloud data of POSTECH via drone mapping and applied neural rendering
  - Participated as team leader and advised by Professor Jaesik Park
  - Selected as Best Undergraduate Research Program of POSTECH 2020

PUBLICATIONS

INTERNATIONAL

[2] Joonghyuk Shin, Minguk Kang, Jaesik Park, "Fill-Up: Balancing Long-Tailed Data with Generative Models", Under Review, 2023.

[1] Minguk Kang, Joonghyuk Shin, and Jaesik Park, "StudioGAN: A Taxonomy and Benchmark of GANs for Image Synthesis", Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2023.

DOMESTIC

[1] Joonghyuk Shin, Minguk Kang, Jaesik Park, "Using Large Scale Text-to-Image Model as a Data Source for Classification", 35th Workshop on Image Processing and Image Understanding (IPIU), 2023.

OPEN SOURCE

PyTorch StudioGAN (★3100+)

- Pytorch library providing implementations of representative Generative Adversarial Networks (GANs).

AWARDS & SCHOLARSHIP

Award for Outstanding Poster Presentation, IPIU (2023)
- Awarded to paper "Using Large Scale Text-to-Image Model as a Data Source for Classification"

Summa Cum Laude, POSTECH (2023)

National Science and Engineering Scholarship, Korea Student Aid Foundation (2021, 2022)

Best Graduation Project, POSTECH CSE (2022)
- Awarded to project "Large scale generative model as a data source for vision tasks"

Silver Award UNI-DTHON Datathon, UNI-D (Union of Korean University Student for CS) (2021)
- Competition on classifying food images

Global Leadership Program, POSTECH CSE (2020, 2021)
- Scholarship for academic excellence

Best Undergraduate Research Program, POSTECH (2020)
- Awarded to project "Neural Point Cloud Rendering of POSTECH"

Jigok Scholarship, POSTECH (2019, 2020)

PROFICIENCIES

General Skill
- Language: Korean (Native), English (Native)
- Programming Languages: Python, C, C++ (advanced) Java, LaTeX, MySQL, HTML5, CSS (familiar)
- Frameworks & Libraries: Git, PyTorch (advanced) Tensorflow, JAX (familiar)