Inbum Park

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Research Interests

Computer Vision, Computational Imaging, Computer Graphics

Education

University of Michigan Ann Arbor, MI

Master of Science in Electrical and Computer Engineering *Aug. 2023 – Present*

- Specialization: Computer Vision

Seoul National University (SNU) Seoul, South Korea

Bachelor of Science in Electrical and Computer Engineering *Mar. 2017 – Aug. 2023*

Publications

Visual Anagrams: Generating Multi-View Optical Illusions with Diffusion Models
Daniel Geng, **Inbum Park**, Andrew Owens.
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2024, Oral.

On the Robustness of Normalizing Flows for Inverse Problems in Imaging
Seongmin Hong, **Inbum Park**, Se Young Chun.
International Conference on Computer Vision (ICCV) 2023.

Text2PointCloud: Text-Driven Stylization for Sparse PointCloud
Inwoo Hwang, Hyeonwoo Kim, Donggeun Lim, **Inbum Park**, Youngmin Kim.
Eurographics (Short Papers) 2023.

Probabilistic Implicit Scene Completion
Dongsu Zhang, Changwoon Choi, **Inbum Park**, Youngmin Kim.
International Conference on Learning Representations (ICLR) 2022, Spotlight.

Experiences

University of Michigan Ann Arbor, MI

Research Intern, advised by Prof. Andrew Owens *Sep. 2023 – Present*

- Leveraged off-the-shelf diffusion models to generate optical illusions.
- Published the paper "Visual Anagrams: Generating Multi-View Optical Illusions with Diffusion Models" to the *IEEE/CVF Conference on Computer Vision and Pattern Recognition* as a second author, which was selected to present an oral talk, among 90 of the 2719 accepted papers.

Seoul National University (SNU) Seoul, South Korea

Research Intern at Intelligent Motion Lab, advised by Prof. Jungdam Won *Jan. 2023 – May. 2023*

- Programmed kinematics, handling mocap data, and learned motion matching to better understand the technical components of computer graphics and animation.
- Applied a recent 3D pose reconstruction model to a video of a patient to perform gait analysis.

Research Intern at Intelligent Computational imaging Lab, advised by Prof. Se Young Chun *Fall 2022*

- Investigated the phenomenon of erroneous images occasionally generated from flow-based models and explained the causes through experiments on inverse problems in imaging, such as super resolution and low light image enhancement.
- Published the paper "On the Robustness of Normalizing Flows for Inverse Problems in Imaging" to the *International Conference on Computer Vision* as a second author.

Research Intern at 3D Vision Lab, advised by Prof. Young Min Kim *Feb. 2021 – Sep. 2021*

- Conducted experiment on a probabilistic approach to shape completion and scene reconstruction using 3D implicit representations.
- Published the paper "Probabilistic Implicit Scene Completion" to the *International Conference on Learning Representations* as a third author and received a spotlight session.

Samsung Electronics Seoul, South Korea

Research Intern at Video Display Department *Jul. 2021 – Aug. 2021*

- Utilized photorealistic style transfer (WCT2) to recreate experiences of the abnormalities in constantly changing TV screens, including blurry, shaky, glitchy, and pixelated effects.
- Devised a sign language translating smart watch for people with hearing disabilities to reduce the burden of communication among the crowd.

Extracurriculars

University of Michigan Ann Arbor, MI

Grader of EECS 442: Computer Vision *Sep. 2023 – Dec. 2023*

Seoul National University (SNU) Seoul, South Korea

SNU Choreography Dance Club HONDDONI *Mar. 2017 – Aug. 2023*

- As an executive in 2018, led a crew of 40 people for a self-organized show held in campus.

SNU Tomorrow's Edge Membership *Sep. 2021 – Feb. 2023*

- As an executive in 2022, led mentoring projects for high school students and university freshmen and sophomores on topics related to engineering.

Introduction to Data Structures Tutor *Sep. 2022 – Dec. 2022*

Skills

Programming Skills: Python, C/C++, Matlab, JavaScript, HTML/CSS

Languages: Fluent - English, Korean, Conversational - Chinese (Mandarin), French, Italian
GRE General Test; Verbal 164 / Quant 170 / Writing 5.0
TOEFL IBT; Reading 29 / Listening 28 / Writing 27 / Speaking 26
HSK 4-级 achieved

Developer Tools: CloudCompare, MeshLab, Mitsuba Renderer, Jupyter Notebook, Git, VS Code