

Susung Hong

✉ susung@cs.washington.edu — 🏠 susunghong.github.io

Education

- 2024– **University of Washington**
Ph.D. in Computer Science & Engineering
Advisors: Steve Seitz, Brian Curless, Ira Kemelmacher-Shlizerman
- 2018–2024 **Korea University**
B.S. in Computer Science & Engineering
GPA: 3.95/4.0 | Military Service: 2020–2021

Publications

- 2025 **Perturb-and-Revise: Flexible 3D Editing with Generative Trajectories**
[Susung Hong](#), Johanna Karras, Ricardo Martin-Brualla, and Ira Kemelmacher-Shlizerman
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- 2025 **Spatiotemporal Skip Guidance for Enhanced Video Diffusion Sampling**
[Junha Hyung*](#), [Kinam Kim*](#), [Susung Hong](#), Min-Jung Kim, and Jaegul Choo
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- 2024 **Smoothed Energy Guidance: Guiding Diffusion Models with Reduced Energy Curvature of Attention**
[Susung Hong](#)
Advances in Neural Information Processing Systems (NeurIPS)
- 2024 **Effective Rank Analysis and Regularization for Enhanced 3D Gaussian Splatting**
[Junha Hyung](#), [Susung Hong](#), Sungwon Hwang, Jaeseong Lee, Jaegul Choo, and Jin-Hwa Kim
Advances in Neural Information Processing Systems (NeurIPS)
- 2024 **Retrieval-augmented Score Distillation for Text-to-3D Generation**
[Junyoung Seo*](#), [Susung Hong*](#), [Wooseok Jang*](#), Min-Seop Kwak, Hyeonsu Kim, Doyup Lee, and Seungryong Kim
International Conference on Machine Learning (ICML)
- 2024 **Depth-Aware Guidance with Self-Estimated Depth Representations of Diffusion Models**
[Gyeongnyeon Kim*](#), [Wooseok Jang*](#), [Gyuseong Lee*](#), [Susung Hong](#), [Junyoung Seo](#), and [Seungryong Kim](#)
Pattern Recognition (PR)
- 2023 **Large Language Models are Frame-level Directors for Zero-shot Text-to-Video Generation**
[Susung Hong](#), [Junyoung Seo](#), [Heeseong Shin](#), [Sunghwan Hong](#), and [Seungryong Kim](#)
Short Version: First Workshop on Controllable Video Generation at ICML
- 2023 **Debiasing Scores and Prompts of 2D Diffusion for View-consistent Text-to-3D Generation**
[Susung Hong*](#), [Donghoon Ahn*](#), and [Seungryong Kim](#)
Advances in Neural Information Processing Systems (NeurIPS)
- 2023 **Improving Sample Quality of Diffusion Models Using Self-Attention Guidance**
[Susung Hong](#), [Gyuseong Lee](#), [Wooseok Jang](#), and [Seungryong Kim](#)
IEEE/CVF International Conference on Computer Vision (ICCV)
- 2022 **Neural Matching Fields: Implicit Representation of Matching Fields for Visual Correspondence**
[Sunghwan Hong](#), [Jisu Nam](#), [Seokju Cho](#), [Susung Hong](#), [Sangryul Jeon](#), [Dongbo Min](#), and [Seungryong Kim](#)
Advances in Neural Information Processing Systems (NeurIPS)

Research Experience

2024–	UW GRAIL Research Assistant (1) Flexible NeRF editing and (2) generative simulation and agents Supervisor: Steve Seitz, Brian Curless, Ira Kemelmacher-Shlizerman
2024	NAVER AI Research Intern (1) Effective rank regularization for 3D Gaussian splatting and (2) generative relighting Mentor: Jin-Hwa Kim
2023	Twelve Labs ML Research Intern (1) Video-language model agents and (2) high-quality dataset Mentor: Minjoon Seo
2022–2023	CVLAB Undergraduate Research Assistant (1) Images, 3D, and video generation, and (2) neural fields Supervisor: Seungryong Kim

Selected Open Source Contributions

2023	huggingface/diffusers ★ 26.2k Significantly contributed to the integration of Self-Attention Guidance (SAG) for high-quality generation.
------	----------------------------------------------------------------------------------------------------------------------------------------------------

Selected Honors and Awards

2024	Graduate Student Conference Presentation Award , University of Washington
2022	National Science and Engineering Scholarship , Korea Student Aid Foundation
2022	Outstanding Paper Award , Signal Processing Joint Conference of IEIE
2021	Innovation Award , SK AI Challenge
2019	Special & 4th Prize , Secure Coding Competition, Ministry of Public Administration and Security
2019	President's List , Korea University
2019	Dean's List , Korea University

Other Experience

2024–	Conference Reviewer , CVPR, NeurIPS, ECCV, ICLR
2024–	Journal Reviewer , Transactions on Image Processing
2023	AI Mentoring , Kyung Hee High School
2021–	Competitions Expert (Highest Rank: 815th) , Kaggle
2020–2021	Cybersecurity and AI Specialist , Republic of Korea Army