

# JUNYOUNG SEO

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## RESEARCH INTEREST

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Generative Models, 3D/Video Representations, Visual Correspondence

## EDUCATION

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**Korea Advanced Institute of Science and Technology (KAIST)** Sep. 2024 - Present  
Integrated M.S./Ph.D. in Artificial Intelligence *Seoul, Korea*

**Korea University** Mar. 2022 - Aug. 2024 (Incompleted)  
Integrated M.S./Ph.D. in Computer Science and Engineering *Seoul, Korea*  
Transferred to KAIST with supervisor

**Korea University** Mar. 2016 - Feb. 2022  
B.S. in Electrical Engineering *Seoul, Korea*

## EXPERIENCE

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**SonyAI, Sony Research** Mar. 2024 - May 2024  
*Research Intern Remote*

**SonyAI, Sony Research** Dec. 2023 - Feb. 2024  
*Research Intern Tokyo, Japan*  
Project: Generative Models for 3D Scene

**Queen Mary University of London** Jun. 2023 - Aug. 2023  
*Visiting Researcher London, UK*  
Work with Dr. Changjae Oh

**CVLAB, Korea University** Jan. 2021 - Feb. 2022  
*Research Intern Seoul, Korea*  
Supervised by Prof. Seungryong Kim

## PUBLICATION

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### Latest Research (Under Review)

**Junyoung Seo**, Kazumi Fukuda, Takashi Shibuya, Takuya Narihira, Naoki Murata, Shoukang Hu, Chieh-Hsin Lai, Seungryong Kim, Yuki Mitsufuji, “**GenWarp: Single Image to Novel Views with Semantic-Preserving Generative Warping**”, *arXiv*, 2024.  
Internship at Sony AI. [Project Page]

### International Conference / Journal

**Junyoung Seo**, Susung Hong, Wooseok Jang, Min-Seop Kwak, Hyeonsu Kim, Doyup Lee, Seungryong Kim, “**Retrieval-augmented Score Distillation for Text-to-3D Generation**”, *International Conference on Machine Learning (ICML)*, 2024.  
Collaborated with Runway. [Project Page]

**Junyoung Seo\***, Wooseok Jang\*, Min-Seop Kwak\*, Jaehoon Ko, Hyeonsu Kim, Junho Kim, Jin-Hwa Kim, Jiyoung Lee, Seungryong Kim, “**Let 2D Diffusion Model Know 3D-Consistency for Robust Text-to-3D Generation**”, *International Conference on Learning Representations (ICLR)*, 2024.

Collaborated with NAVER AI Lab. [Project Page]

Gyeongnyeon Kim\*, Wooseok Jang\*, Gyuseong Lee\*, Susung Hong, **Junyoung Seo**, Seungryong Kim, “DAG: Depth-Aware Guidance with Denoising Diffusion Probabilistic Models”, *Pattern Recognition. (PR)*, 2024.

**Junyoung Seo\***, Gyuseong Lee\*, Seokju Cho, Jiyoung Lee, Seungryong Kim, “MIDMs: Matching Interleaved Diffusion Models for Exemplar-based Image Translation”, *AAAI Conference on Artificial Intelligence (AAAI)*, 2023.

Collaborated with NAVER AI Lab. [Project Page]

Jiwon Kim\*, Yeongjo Min\*, Daehwan Kim\*, Gyuseong Lee, **Junyoung Seo**, Kwangrok Ryoo, Seungryong Kim, “ConMatch: Semi-Supervised Learning with Confidence-Guided Consistency Regularization”, *European Conference on Computer Vision (ECCV)*, 2022.

Jiwon Kim\*, Kwangrok Ryoo\*, **Junyoung Seo\***, Gyuseong Lee\*, Daehwan Kim, Hansang Cho, Seungryong Kim, “Semi-Supervised Learning of Semantic Correspondence with Pseudo-Labels”, *IEEE Conf. Computer Vision Pattern Recognition (CVPR)*, 2022.

### Pre-print

Susung Hong, **Junyoung Seo**, Sunghwan Hong, Heeseong Shin, Seungryong Kim, “Large Language Models are Frame-level Directors for Zero-shot Text-to-Video Generation”, *arXiv*, 2023.

Kihong Kim\*, Yunho Kim\*, Seokju Cho, **Junyoung Seo**, Jisu Nam, Kychul Lee, Seungryong Kim, Kwang Hee Lee, “DiffFace: Diffusion-based Face Swapping with Facial Guidance”, *arXiv*, 2022. [Project Page]

## ACADEMIC SERVICES

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### Reviewer

- Computer Vision and Pattern Recognition (CVPR)
- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

## HONORS

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Korea University, Korea <i>Award for Academic Excellence, 2st Semester, 2021</i>	Jan. 2022
Korea University, Korea <i>Award for Academic Excellence, 1st Semester, 2021</i>	Jul. 2021
Korea Electric Power Corporation, Korea <i>KEPCO Scholarship</i>	Mar. 2021
Incorporated Association GreenLight and HYUNDAI AutoEver, Korea <i>3rd Prize, Barrier-free App Development Contest</i>	Feb. 2021

HYUNDAI MOBIS, Korea	Jan. 2021
<i>Special Award in Self-driving RC Car Development, Korea Embedded Software Contest</i>	
Korea University, Korea	Jul. 2021
<i>Award for Academic Excellence, 2st Semester, 2020</i>	
Korea University, Korea	Sep. 2020
<i>Professor's Association Seokrimhoe Scholarship</i>	
Korea University, Korea	Jul. 2020
<i>Award for Academic Excellence, 1st Semester, 2020</i>	
SK, Korea	Dec. 2013
<i>Grand Prize in App Development, SK Smarteen App Challenge</i>	

## PROJECTS

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Samsung Electro-Mechanics	2021-2022
<i>Automation of Deep Learning Model Update using Unlabeled Data</i>	

## MILITARY OBLIGATION

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Repubic of Korea Air Force	Feb. 2018 - Jan. 2020
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