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Seonghyeon Nam

Ph.D., Computer Science

RESEARCH INTERESTS

Computer Vision, Machine Learning

computational photography, deep generative models, learning with minimal supervision

EXPERIENCE

Meta (Facebook), Sunnyvale, California, United States

Research Scientist

Feb' 22 - Present

York University, Toronto, Ontario, Canada

Postdoctoral Fellow

Jan' 21 - Jan' 22

- Superviser: Prof. Michael S. Brown

- Worked on multi-image fusion and layer separation using coordinate-based neural representations.

Samsung AI Center, Toronto, Ontario, Canada

Postdoctoral Intern

Aug' 21 - Nov' 21

- Superviser: Prof. Michael S. Brown

- Worked on a raw image reconstruction based on metadata.

Snap Inc., Venice, California, United States

Research Intern

May' 18 - Aug' 18

- Advisor: Dr. Chongyang Ma

- Worked on the problem of synthesizing time-lapse videos from a single image.

- Developed a deep generative model for hallucinating outdoor illumination without reference.

Yonsei University, Seoul, South Korea

Research Assistant

Mar' 14 - Aug' 20

- Advisor: Prof. Seon Joo Kim

EDUCATION

Yonsei University, Seoul, South Korea

Ph.D., Computer Science, Advisor: Prof. Seon Joo Kim

Mar' 14 - Aug' 20

GPA: 4.10/4.3

Yonsei University, Seoul, South Korea

B.S., Computer Science,

Mar' 09 - Jeb' 14

GPA: 3.69/4.3

PUBLICATIONS

S. Nam, M. A. Brubaker, and M. S. Brown. Neural Image Representations for Multi-Image Fusion and Layer Separation. In *Proceedings of the European Conference on Computer Vision* (ECCV), 2022.

Y. H. Kim, S. Nam, and S. J. Kim. 2PESNet: Towards Online Processing of Temporal Action Localization. *Pattern Recognition* (PR) 131 (2022): 108871.

S. Nam, A. Punnappurath, M. A. Brubaker and M. S. Brown. Learning sRGB-to-Raw-RGB Derendering with Content-Aware Metadata. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2022.

D. Kim, J. W. Kim, S. Nam, D. Lee, Y. Lee, N. Kang, H.-E. Lee, B. Yoo, J.-J. Han, and S. J. Kim. Large Scale Multi-Illuminant (LSMI) Dataset for Developing White Balance Algorithm

under Mixed Illumination. In *Proceedings of the IEEE International Conference on Computer Vision* (ICCV), 2021.

- Y. H. Kim, S. Nam, and S. J. Kim. Temporally Smooth Online Action Detection using Cycle-consistent Future Anticipation. *Pattern Recognition* (PR) 116 (2021): 107954.
- S. Jeon, S. Nam, S. W. Oh, and S. J. Kim. Cross-Identity Motion Transfer for Arbitrary Objects through Pose-Attentive Video Reassembling. In *Proceedings of the European Conference on Computer Vision* (ECCV), 2020.
- Y. Kim, S. Nam, I. Cho, and S. J. Kim. Unsupervised Keypoint Learning for Guiding Class-Conditional Video Prediction. In *Advances in Neural Information Processing Systems* (NeurIPS), 2019.
- S. Nam, C. Ma, M. Chai, W. Brendel, N. Xu, and S. J. Kim. End-to-End Time-Lapse Video Synthesis from a Single Outdoor Image. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2019.
- S. Nam, Y. Kim, and S. J. Kim. Text-Adaptive Generative Adversarial Networks: Manipulating Images with Natural Language. In *Advances in Neural Information Processing Systems* (NeurIPS), 2018 (Spotlight).
- S. Nam and S. J. Kim. Modelling the Scene Dependent Imaging in Cameras with a Deep Neural Network. In *Proceedings of the IEEE International Conference on Computer Vision* (ICCV), 2017.
- S. Nam*¹, Y. Hwang*, Y. Matsushita, and S. J. Kim. A Holistic Approach to Cross-Channel Image Noise Modeling and its Application to Image Denoising. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2016 (Spotlight).

PATENT

Registration

Method and Apparatus for Generating Video Based on Keypoints. Korea Patent No. 10-2231391

Apparatus and method for generating manipulated image based on natural language and system using the same. Korea Patent No. 10-2192015

Method and apparatus for image adjustment based on semantics-aware. Korea Patent No. 10-2192016

ACADEMIC SERVICE

Conference Reviewer

IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2018 - Present
IEEE International Conference on Computer Vision (ICCV)	2019 - Present
European Conference on Computer Vision (ECCV)	2020
Advances in Neural Information Processing Systems (NeurIPS)	2020 - Present
International Conference on Learning Representations (ICLR)	2021
AAAI Conference on Artificial Intelligence (AAAI)	2020
Asian Conference on Computer Vision (ACCV)	2018
Winter Conference on Applications of Computer Vision (WACV)	2017, 2018

Journal Reviewer

IEEE Transactions on Image Processing (TIP)
Computer Vision and Image Understanding (CVIU)

¹Equal contribution

Talks	Invited Talk, Samsung AI Center Toronto Doctoral Colloquium, Korean Conference on Computer Vision (KCCV) Spotlight, Conference on Neural Information Processing Systems (NeurIPS) Tech Talk, NAVER Corp.	2021 2019 2018 017, 2018
	Spotlight, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2016
Honors &	Outstanding Reviewer, ICCV 2021	2021
Awards	VISTA Postdoctoral Fellowship, \$55,000CAD/year, York University	2021
	Postdoctoral Fellowship, \$39,000/year, National Research Foundation of Korea	2021
	NAVER Fellowship, \$4,300, NAVER Corp.	2017
	Excellent Paper Award, Dept. of Computer Science, Yonsei University	2016
	Bronze Prize, \$4,300, 22 nd Samsung HumanTech Paper Award	2016
	Global Ph.D. Fellowship, \$26,000/year, National Research Foundation of Korea 202	!5 - 2019 ———
SKILLS	Languages Python, C/C++, Matlab, Java, C#, HTML, PHP	
	Deep Learning Libraries	
	PyTorch, TensorFlow, Caffe, Keras	
	ETC	
	OpenCV, Android SDK	