Sangryul Jeon

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Interests

The driver of my research is to develop robust *computer vision systems that can understand an object or scene of interest even under strong geometry and appearance variations*. In order to keep them practical and useful in the real-world, I'm also interested in *learning them without the need of supervision* through the techniques of self-supervising, metric learning, and domain adaptation.

Experience

UC Berkeley - **Postdoctoral Scholar** Mar. 2022 - Present

· Electrical Engineering and Computer Sciences Department
· Supervised by Prof. Stella X. Yu

Adobe - **Research Intern** May. 2021 - Aug. 2021

· Creative Intelligence Lab (San jose)
· Worked with Zhifei Zhang, Zhe Lin, Zhihong Ding, Scott Cohen

Yonsei University - **Research Assistant** Mar. 2016 - Feb. 2022

· School of Electrical and Electronic Engineering
· Supervised by Prof. Kwanghoon Sohn

Education

Philosophy of Doctorate - Yonsei University Mar. 2016 - Feb. 2022

· School of Electrical and Electronic Engineering

Barchelor of Science - Yonsei University Mar. 2009 - Feb. 2016

· School of Electrical and Electronic Engineering

Publications

COAT: Correspondence-driven Object Appearance Transfer - **Accepted** Nov. 2022

· **Sangryul Jeon**, Zhifei Zhang, Zhe Lin, Scott Cohen, Zhihong Ding, Kwanghoon Sohn
· British Machine Vision Conference (**BMVC**)

Neural Matching Fields: Implicit Representation of Matching Cost for Semantic Correspondence - **Accepted** Dec. 2022

· Sunghwan Hong, Jisu Nam, Seokju Cho, Susung Hong, **Sangryul Jeon**, Dongbo Min, Seungryong Kim
· Neural Information Processing Systems (**NeurIPS**)

Unsupervised Scene Sketch to Photo Synthesis - **Accepted** Oct. 2022

· Jiayun Wang, **Sangryul Jeon**, Stella X. Yu, Xi Zhang, Himanshu Arora, and Yu Lou
· European Conference on Computer Vision Workshops (**ECCVW**)
· AIM: Advances in Image Manipulation workshop and challenges

Pyramidal Semantic Correspondence Networks - **Accepted** Oct. 2021

· **Sangryul Jeon**, Seungryong Kim, Dongbo Min, and Kwanghoon Sohn
· IEEE Trans. On Pattern Analysis and Machine Intelligence (**TPAMI**)

CATs: Cost Aggregation Transformers for Visual Correspondence Sep. 2021

· {Seokju Cho, Sunghwan Hong}*, **Sangryul Jeon**, Yunsung Lee, Kwanghoon Sohn, Seungryong Kim
· Neural Information Processing Systems (**NeurIPS**)

Mining Better Samples for Contrastive Learning of Temporal Correspondence Jun. 2021

· **Sangryul Jeon**, Dongbo Min, Seungryong Kim, and Kwanghoon Sohn
· IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)

Guided Semantic Flow Aug. 2020

· **Sangryul Jeon**, Dongbo Min, Seungryong Kim, and Kwanghoon Sohn
· European Conference on Computer Vision (**ECCV**)

Joint Learning of Semantic Alignment and Object Landmark Detection Oct. 2019

· **Sangryul Jeon**, Dongbo Min, Seungryong Kim, and Kwanghoon Sohn
· IEEE/CVF International Conference on Computer Vision (**ICCV**)

Video Summarization by Learning Relationships between Action and Scene Oct. 2019

· Jungin Park, Jiyoung Lee, **Sangryul Jeon**, and Kwanghoon Sohn
· IEEE/CVF International Conference on Computer Vision Workshops (**ICCVW**)
· The 2nd Workshop and Challenge on Comprehensive Video Understanding in the Wild (CoVieW'2019)

Graph Regularization Network with Semantic Affinity for Weakly-supervised Temporal Action Localization Sep. 2019

· Jungin Park, Jiyoung Lee, **Sangryul Jeon**, Seungryong Kim, and Kwanghoon Sohn
· IEEE International Conference on Image Processing (**ICIP**)

Semantic Attribute Matching Networks Jun. 2019

· Seungryong Kim, Dongbo Min, Somi Jeong, Sunok Kim, **Sangryul Jeon**, and Kwanghoon Sohn
· IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)

Recurrent Transformer networks for Semantic Correspondence - **Spotlight** Dec. 2018

· Seungryong Kim, Stephen Lin, **Sangryul Jeon**, Dongbo Min, and Kwanghoon Sohn
· Neural Information Processing Systems (**NeurIPS**)

Learning to Detect, Associate, and Recognize Human Actions and Surrounding Scenes in Untrimmed Videos Oct. 2018

· Jungin Park, **Sangryul Jeon**, Seungryong Kim, Jiyoung Lee, Sunok Kim, and Kwanghoon Sohn
· ACM International Conference on Multimedia Workshops (**ACMMMW**)
· The 1st Workshop and Challenge on Comprehensive Video Understanding in the Wild

PARN: Pyramidal Affine Regression Networks for Dense Semantic Correspondence Sep. 2018

· **Sangryul Jeon**, Seungryong Kim, Dongbo Min, and Kwanghoon Sohn
· European Conference on Computer Vision (**ECCV**)

Convolutional Feature Pyramid Fusion via Attention Network Sep. 2017

· **Sangryul Jeon**, Seungryong Kim, and Kwanghoon Sohn
· IEEE International Conference on Image Processing (**ICIP**)

FCSS: Fully Convolutional Self-Similarity for Dense Semantic Correspondence Jul. 2017

· Seungryong Kim, Dongbo Min, Bumsub Ham, **Sangryul Jeon**, Steve Lin, and Kwanghoon Sohn
· IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)

Projects

To create AI systems that act appropriately and effectively in novel situations that occur in open worlds Mar. 2020 – Feb. 2022

· Funded by Institute of Information & Communication Technology (IITP)

Fundamental study of vision algorithms for comprehensive and thorough understanding of videos Sep. 2017 - Dec. 2020

· Funded by Ministry of Science, ICT and Future planning

Development of the high-precision AR & VR contents based on smart-car sensors Apr. 2016 – Dec.2021

· Funded by Institute of Information & Communication Technology (IITP)

Invited Talks

Pyramidal Affine Regression Networks for Dense Semantic Correspondence

·NAVER Feb. 2019
·Korean Conference on Computer Vision (KCCV) 2019 Jul. 2019

Joint Learning of Semantic Alignment and Object Landmark Detection

·NAVER Oct. 2019
·Samsung AI Forum Nov. 2019
·Korean Conference on Computer Vision (KCCV) 2020 Aug. 2020

Understanding Object Semantics Driven by Correspondences

·University of British Columbia hosted by Prof. Kwang Moo Yi May. 2021

Activities

Reviewer

·IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2020-2022
·IEEE/CVF International Conference on Computer Vision (**ICCV**) 2021
·European Conference on Computer Vision (**ECCV**) 2022
·Neural Information Processing Systems (**NeurIPS**) 2020-2022
·International Conference on Learning Representations (**ICLR**) 2021-2023
·International Conference on Machine Learning (**ICML**) 2021-2022
·Asian Conference on Computer Vision (**ACCV**) 2020-2022
·IEEE Winter Conference on Applications of Computer Vision (**WACV**) 2021-2022
·Pattern Recognition
·Neurocomputing

References

Kwanghoon Sohn - Full professor

· School of Electrical and Electronic Engineering
· Yonsei University, Seoul, Korea
· Relationship: MS & Ph.D supervisor
· E-mail: `khsohn@yonsei.ac.kr`

Last modified on Oct. 01, 2022