

# Dahun Kim

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Research Interests	<ul style="list-style-type: none"><li>• <b>Deep Learning</b>; Minimal human supervision: Self-supervised learning, Weakly-supervised learning.</li><li>• <b>Computer Vision</b>; Recognition, Image/Video understanding (pixel level, high level), Image/Video Processing, Representation learning</li></ul>	
Research Experiences	• <b>Adobe Research</b> , San Jose, CA, Research Intern, Deep Learning Group, Creative Intelligence Lab	Jun.2019 - Sep.2019
	• <b>KAIST</b> , Daejeon, Korea, Research Assistant, Robotics and Computer Vision Lab,	Mar.2016 - Present
Education	Ph.D. in Electrical Engineering, <b>KAIST</b> , Advisor: Prof. In So Kweon	Mar.2018 - Present
	M.S. in Electrical Engineering, <b>KAIST</b> , Thesis: "Reducing Human Supervision in Supervised Learning" Advisor: Prof. In So Kweon	Mar.2016 - Feb.2018
	B.S. in Electrical Engineering, <b>KAIST</b> , Received Full Scholarship	Feb.2012 - Feb.2016
Publications	<ul style="list-style-type: none"><li>• <b>Peer-Reviewed Conferences:</b></li></ul> <p>C1. <b>Dahun Kim</b>, Sanghyun Woo, Joon-Young Lee, In So Kweon, "Video Panoptic Segmentation", in <b>CVPR 2020 (Oral)</b>, Seattle, USA (Acceptance: 335/6656 <math>\approx</math> 5.0%)</p> <p>C2. Yunjae Jung, <b>Dahun Kim</b>, Sanghyun Woo, Kyunsu Kim, Sungjin Kim, In So Kweon, "Hide-and-Tell: Learning to Bridge Photo Streams for Visual Storytelling", in <b>AAAI 2020</b>, New York, USA (Acceptance: 1591/7737 <math>\approx</math> 20.6%)</p> <p>C3. Kwanyong Park, Sanghyun Woo, <b>Dahun Kim</b>, Donghyeon Cho, In So Kweon, "Preserving Semantic and Temporal Consistency for Unpaired Video-to-Video Translation", in <b>ACM MM 2019</b>, Nice, France (Acceptance: 252/936 <math>\approx</math> 26.9%)</p> <p>C4. Donghyeon Cho, Yunjae Jung, Francois Rameau, <b>Dahun Kim</b>, Sanghyun Woo, In So Kweon, "Video Retargeting: Trade-off between Content Preservation and Spatio-temporal Consistency", in <b>ACM MM 2019</b>, Nice, France (Acceptance: 252/936 <math>\approx</math> 26.9%)</p> <p>C5. <b>Dahun Kim*</b>, Sanghyun Woo*, Joon-Young Lee, In So Kweon, "Deep Video Inpainting", in <b>CVPR 2019</b>, Long Beach, USA (Acceptance: 1294/5160 <math>\approx</math> 25.2%)</p> <p>C6. <b>Dahun Kim*</b>, Sanghyun Woo*, Joon-Young Lee, In So Kweon, "Deep Blind Video Decaptioning by Temporal Aggregation and Recurrence", in <b>CVPR 2019</b>, Long Beach, USA (Acceptance: 1294/5160 <math>\approx</math> 25.2%)</p>	

C7. **Dahun Kim**, Donghyeon Cho, In So Kweon,  
 "Self-Supervised Video Representation Learning with Space-Time Cubic Puzzles",  
 in **AAAI 2019 (Oral)**, Honolulu, USA (Acceptance: 459/7095  $\approx$  6.5%)

C8. Yunjae Jung, Donghyeon Cho, **Dahun Kim**, Sanghyun Woo, In So Kweon,  
 "Discriminative Feature Learning for Unsupervised Video Summarization",  
 in **AAAI 2019 (Oral)**, Honolulu, USA (Acceptance: 459/7095  $\approx$  6.5%)

C9. Sanghyun Woo\*, **Dahun Kim\***, Donghyeon Cho, In So Kweon,  
 "LinkNet: Relational Embedding for Scene Graph",  
 in **NeurIPS 2018**, Montreal, Canada (Acceptance: 1011/4856  $\approx$  20.8%)

C10. **Dahun Kim**, Donghyeon Cho, Donggeun Yoo, In So Kweon,  
 "Learning Image Representations by Completing Damaged Jigsaw Puzzles",  
 in **WACV 2018 (Oral)**, Lake Tahoe, USA

C11. **Dahun Kim**, Donghyeon Cho, Donggeun Yoo, In So Kweon,  
 "Two-Phase Learning for Weakly Supervised Object Localization",  
 in **ICCV 2017**, Venice, Italy (Acceptance: 621/2143  $\approx$  28.9%)

• **Peer-Reviewed Journals:**

J1. **Dahun Kim\***, Sanghyun Woo\*, Joon-Young Lee, In So Kweon,  
 "Recurrent Temporal Aggregation Framework for Deep Video Inpainting",  
 in *IEEE Trans. on Pattern Analysis and Machine Intelligence* (**TPAMI 2020**), IF=17.730

Reviewer  
Experiences

- European Conf. on Computer Vision (ECCV) 2020
- IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 2020
- Association for the Advancement of Artificial Intelligence (AAAI) 2020
- IEEE International Conf. on Computer Vision (ICCV) 2019
- IEEE Trans. on Neural Networks and Learning Systems (TNNLS)

Awards  
and Honors

- Microsoft Research Asia (MSRA) Ph.D Fellowship 2019 Winner (\$10,000) Oct.2019
- Global Ph.D Fellowship, National Research Foundation of Korea Aug.2018 - Present  
 (about \$60K + 3-Year Full scholarship)
- 1st Place Award in ChaLearnLAP 2018 Inpainting Challenge Track 2 Sep.2018  
 – video decaptioning (ECCV2018 Challenge)
- International Computer Vision Summer School (ICVSS), Sicily, Italy Jul.2018
- Honorable Mention, 24th HumanTech Paper Award, Feb.2018  
 Samsung Electronics Co., Ltd. (\$2,000)
- Lab Student Representative (over 30 members), Sep.2018 - Present

Teaching  
Experiences

Teaching assistant at EE dept., KAIST  
 EE305 Introduction to electronics lab. (Spring, 2017)  
 EE209 Programming Structures for Electrical Engineering (Fall, 2017)  
 EE898 Advanced Topics in Deep Learning for Robotics and Vision (Spring, 2018)  
 EE735 Computer Vision (Fall, 2019)

Computer  
Skills

**Languages:** Python, Matlab, Lua  
**Libraries:** Pytorch, Tensorflow, Caffe

Languages

English(fluent), Korean(native)

References

**Prof. In So Kweon**  
School of Electrical Engineering, KAIST  
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Homepage: <http://rcv.kaist.ac.kr>  
Relationship: M.S. - Ph.D. advisor in KAIST