Dahun Kim

Ph.D. Candidate, Robotics and Computer Vision Lab.
Korea Advanced Institute of Science and Technology (KAIST)

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Research Interests

• **Deep Learning;** Weakly-supervised localization, Self-supervised representation learning, Multi-task learning.
• **Computer Vision;** Image/Video understanding, Image/Video Procdssing, Representation learning, Object localization

Research Experiences

• **Adobe Research**, San Jose, CA, Jun.2019 - Sep.2019
Research Intern, Deep Learning Group, Creative Intelligence Lab

• **KAIST**, Daejeon, Korea, Mar.2016 - Present
Research Assistant, Robotics and Computer Vision Lab,

Education

Ph.D. in Electrical Engineering, **KAIST,** Mar.2018 - Present
Advisor: Prof. In So Kweon

M.S. in Electrical Engineering, **KAIST,** Mar.2016 - Feb.2018
Thesis: "Reducing Human Supervision in Supervised Learning"
Advisor: Prof. In So Kweon

B.S. in Electrical Engineering, **KAIST,** Feb.2012 - Feb.2016
Received Full Scholarship

Publications

1. **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.

2. Yunjae Jung, **Dahun Kim**, Sanghyun Woo, Kyunsu Kim, Sungjin Kim, In So Kweon,
"Hide-and-Tell: Learning to Bridge Photo Streams for Visual Storytelling",
in *Association for the Advancement of Artificial Intelligence* (**AAAI**), Jan. 2020.

3. Kwanyong Park, Sanghyun Woo, **Dahun Kim**, Donghyeon Cho, In So Kweon,
"Preserving Semantic and Temporal Consistency for Unpaired Video-to-Video Translation",
in *ACM Multimedia* (**MM**), 2019.

4. Donghyeon Cho, Yunjae Jung, Francois Rameau, **Dahun Kim**, Sanghyun Woo, In So Kweon,
"Video Retargeting: Trade-off between Content Preservation and Spatio-temporal Consistency",
in *ACM Multimedia* (**MM**), 2019.

5. **Dahun Kim***, Sanghyun Woo*, Joon-Young Lee, In So Kweon,
"Deep Video Inpainting",
in *IEEE Conf. on Computer Vision and Pattern Recognition* (**CVPR**), Jul. 2019.

6. **Dahun Kim***, Sanghyun Woo*, Joon-Young Lee, In So Kweon,
"Deep Blind Video Decaptioning by Temporal Aggregation and Recurrence",
in *IEEE Conf. on Computer Vision and Pattern Recognition* (**CVPR**), Jul. 2019.

7. **Dahun Kim**, Donghyeon Cho, In So Kweon,
"Self-Supervised Video Representation Learning with Space-Time Cubic Puzzles",
in *Association for the Advancement of Artificial Intelligence* (**AAAI**), Jan. 2019. [Oral]

8. Yunjae Jung, Donghyeon Cho, **Dahun Kim**, Sanghyun Woo, In So Kweon,
"Discriminative Feature Learning for Unsupervised Video Summarization",
in *Association for the Advancement of Artificial Intelligence* (**AAAI**), Jan. 2019. [Oral]

9. Sanghyun Woo*, **Dahun Kim***, Donghyeon Cho, In So Kweon,
"LinkNet: Relational Embedding for Scene Graph",
in *Neural Information Processing Systems* (**NIPS**), Dec. 2018.

10. **Dahun Kim**, Donghyeon Cho, Donggeun Yoo, In So Kweon,
"Learning Image Representations by Completing Damaged Jigsaw Puzzles",
in *IEEE Winter Conf. on Applications of Computer Vision* (**WACV**), Mar. 2018. [Oral]

11. **Dahun Kim**, Donghyeon Cho, Donggeun Yoo, In So Kweon,
"Two-Phase Learning for Weakly Supervised Object Localization",
in *IEEE International Conf. on Computer Vision* (**ICCV**), Oct. 2017.

Reviewer Experiences

- 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)

Honors

- Microsoft Research Asia (MSRA) Ph.D Fellowship 2019 Winner — Oct.2019
- Global Ph.D Fellowship, National Research Foundation of Korea — Aug.2018 - Present
  (about $20K /year + Full scholarship for 2+1 years)
- 1st Place Award in ChaLearnLAP 2018 Inpainting Challenge Track 2 – video decaptioning (ECCV2018 Challenge) — Sep.2018
- International Computer Vision Summer School (ICVSS), Sicily, Italy — Jul.2018
- Honorable Mention, 24th HumanTech Paper Award, Samsung Electronics Co., Ltd. ($2,000) — Feb.2018

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)

Computer Skills

Languages: Python, Matlab, C, Lua
Libraries: Pytorch, 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