

Dahun Kim

Senior Research Scientist, Google DeepMind

Google Gradient Canopy, Mountain View, CA 94043

mcahny@google.com | <https://mcahny.github.io>

Research Experience

- **Google DeepMind**, MTV, CA
Senior Research Scientist, Vision-and-Language team
May.2024 - Present
- **Google Brain, Google DeepMind**, MTV, CA
Research Scientist
Jul.2022 - May.2024
- **Google Research**, MTV, CA
Research Intern, worked on “video mask transformer”
Jul.2022 - Apr.2023
- **Google Brain**, MTV, CA
Research Intern, worked on “open-world detection - detect everything”
Jun.2020 - Nov.2020
- **Adobe Research**, San Jose, CA
Research Intern, worked on “video panoptic segmentation”
Jun.2019 - Sep.2019

Education

- **Ph.D.** in Dept. of **Electrical Eng., KAIST**
Advised by Prof. In So Kweon
Thesis: “Learning Dense Pixel Features for Video Processing and Understanding”
[Best Thesis Award from KAIST EE.](#)
Mar.2018 - Feb.2022
- **M.S.** in Dept. of **Electrical Eng., KAIST**
Advised by Prof. In So Kweon
Thesis: “Reducing Human Supervision in Supervised Learning”
Mar.2016 - Feb.2018
- **B.S.** in Dept. of **Electrical Eng., KAIST**
Mar.2012 - Feb.2016

Academic Service

- **Area Chair** in ICML 2025
- **Area Chair** in NeurIPS 2024, 2023
- **Area Chair** in CVPR 2025, 2024, 2023
- Journal Reviewer in TPAMI, TNNLS, TIP, EuroGraphics
- Conference Reviewer in CVPR [22, 21, 20], NeurIPS [21, 20], ECCV [24, 20], ICCV [25, 23, 21, 19], ICLR [24, 21], AAAI [24, 22, 21, 20],

Publications

036. Dahun Kim, A. Piergiovanni, G. Mallya, A. Angelova
“VideoComp: Advancing Fine-Grained Compositional and Temporal Alignment in Video-Text Models”
in **CVPR 2025**, Nashville, USA
035. S. Wang, Dahun Kim, A. Taalimi, C. Sun, W. Kuo
“Learning Visual Grounding from Generative Vision and Language Model”
in **WACV 2025**, Arizona, USA
034. A. Piergiovanni Dahun Kim, M. Ryoo, I. Noble, A. Angelova
“Whats in a Video: Factorized Autoregressive Decoding for Online Dense Video Captioning”
in **Preprint**
033. Dahun Kim, A. Angelova, W. Kuo
“Region-centric Image-Language Pretraining for Open-Vocabulary Detection”
in **ECCV 2024**, Milano, Italy
[Launched at Google Vertex AI model garden](#)
032. M. Kim, J. Choi, Dahun Kim, Y. M. Ro
“Textless Unit-to-Unit training for Many-to-Many Multilingual Speech-to-Speech Translation”
in **TASLP 2024**, *IEEE Trans. on Audio, Speech and Language Processing*
031. A. Piergiovanni, I. Nobel, Dahun Kim, M. Ryoo, V. Gomes, A. Angelova
“Mirasol3B: A Multimodal Autoregressive model for time-aligned and contextual modalities”
in **CVPR 2024**, Seattle, USA
[Featured in Google AI BlogPost](#)
031. J. Kim, H. Oh, B. Kwon, Dahun Kim, Y. Kwon, T. Oh
“Uni-DVPS: Unified Model for Depth-Aware Video Panoptic Segmentation”
in **RA-L and ICRA 2024 (Oral)**; *IEEE Robotics and Automation Letters* ,
030. Dahun Kim, A. Angelova, W. Kuo
“Contrastive Feature Masking Open-vocabulary Vision Transformer”,
in **ICCV 2023**, Paris, France
029. Dahun Kim, A. Angelova, W. Kuo
“Region-Aware Pretraining for Open-Vocabulary Object Detection with Vision Transformers”,
in **CVPR 2023 (Highlight - accept rate: 2.5%)**, Vancouver, Canada
[Featured in Google AI BlogPost](#)
028. W. Kuo†, A. Piergiovanni†, Dahun Kim*, X. Luo*, B. Caine, W. Li, A. Ogale, L. Zhou, A. Dai, Z. Chen, C. Cui, A. Angelova
“MaMMUT: A Simple Vision-Encoder Text-Decoder Architecture for Multimodal Tasks”,
in **TMLR 2023: Transactions on Machine Learning Research**
[Featured in Google AI BlogPost](#)
027. R. Li, Dahun Kim, W. Kuo
“RECLIP: Resource-efficient CLIP by Training with Small Images”,
in **TMLR 2023: Transactions on Machine Learning Research**

026. Shin, **Dahun Kim**, Q. Yu, J. Xie, H.S. Kim, B. Green, I.S. Kweon, K.J. Yoon, L.C. Chen
“[Video-kMaX: A Simple Unified Approach for Online and Near-Online Video Panoptic Segmentation](#)”,
in **WACV 2024 (Oral)** and **CVPRW 2023: ‘Transformers for Vision’ Workshop**
025. Y. Kwon, **Dahun Kim**, D. Ceylan, H. Fuchs
“[Neural Image-based Avatars: Generalizable Radiance Fields for Human Avatar Modeling](#)”,
in **ICLR 2023**, Kigali, Rwanda
024. **Dahun Kim**, S. Woo, J.Y. Lee, I.S. Kweon
“[Dense Pixel-level Interpretation of Dynamic Scenes with Video Panoptic Segmentation](#)”,
in **TIP 2022: IEEE Trans. on Image Processing**, IF=10.6
023. **Dahun Kim**, J. Xie, H. Wang, S. Qiao, H.S. Kim, H. Adam, I.S. Kweon, L.C. Chen
“[TubeFormer-DeepLab: video mask transformer](#)”,
in **CVPR 2022**, New Orleans, USA
[Ranked #1 on SemKITTI-DVPS, #3 on KITTI-STEP benchmark](#)
022. Q. Yu, H. Wang, **Dahun Kim**, S. Qiao, M. Collins, Y. Zhu, H. Adam, A. Yuille, L.C. Chen
“[CMT-DeepLab: dynamic clustering mask transformers for panoptic segmentation](#)”,
in **CVPR 2022 (Oral - accept rate: 4%)**, New Orleans, USA
021. **Dahun Kim**, T.Y. Lin, A. Angelova, I. S. Kweon, W. Kuo
“[Learning open-world object proposals without learning to classify](#)”,
in **RA-L and ICRA 2022 (Oral)**; *IEEE Robotics and Automation Letters*, Philadelphia, USA
[Invited paper talk at Open-World Segmentation \(UVO\) Workshop @ ICCV 2021](#)
[Received Qualcomm Innovation Award 2021](#)
020. Y. Kwon, S. Petrangeli, **Dahun Kim**, H. Wang, V. Swaminathan, H. Fuchs
“[Tailor Me: An Editing Network for Fashion Attribute Shape Manipulation](#)”.
in **WACV 2022 (Oral)**
019. Y. Kwon, **Dahun Kim**, D. Ceylan, H. Fuchs
“[Neural Human Performer: learning generalizable radiance fields for human performance rendering](#)”,
in **NeurIPS 2021 (Spotlight - accept rate < 3.0%)**, Virtual
[Received Bronze Prize, 28th Samsung HumanTech Paper Award](#)
018. S. Woo, **Dahun Kim**, J.Y. Lee, I. S. Kweon,
“[Learning to associate every segment for video panoptic segmentation](#)”.
in **CVPR 2021**, Virtual
017. S. Woo, **Dahun Kim**, J.Y. Lee, I.S. Kweon
“[Global Context and Geometric Priors for Effective Non-Local Self-Attention](#)”.
in **BMVC 2021**
[Received Bronze Prize, 27th Samsung HumanTech Paper Award](#)
016. M. Kim, S. Woo, **Dahun Kim**, I. S. Kweon,
“[The Devil is in the Boundary: Exploiting Boundary Representation for Basis-based Instance Segmentation](#)”.
in **WACV 2021 (Oral)**
015. Y. Kwon, S. Petrangeli, **Dahun Kim**, H. Wang, V. Swaminathan, H. Fuchs,
“[Rotationally-Temporally Consistent Novel View Synthesis for Human Performance Video](#)”,
in **ECCV 2020 (Spotlight - accept rate: 5.3%)**, Virtual

014. **Dahun Kim**, S. Woo, J.Y. Lee, I.S. Kweon,
“[Video panoptic segmentation](#)”,
in **CVPR 2020** (**Oral - accept rate: 5.0%**), Virtual
013. **Dahun Kim***, S. Woo*, J.Y. Lee, I.S. Kweon,
“[Recurrent temporal aggregation framework for deep video inpainting](#)”,
in **TPAMI 2020: IEEE Trans. on Pattern Analysis and Machine Intelligence**, IF=24.314
[Received KAIST-Samsung Industry-University Cooperation Best Paper Award](#)
012. Y. Jung, **Dahun Kim**, S. Woo, K. Kim, S. Kim, I.S. Kweon,
“[Hide-and-Tell: Learning to bridge photo streams for visual storytelling](#)”,
in **AAAI 2020**, New York, USA (Acceptance: 1591/7737 \approx 20.6%)
011. Y. Kwon, S. Petrangeli, **Dahun Kim**, H. Wang, H. Fuchs, V. Swaminathan,
“[Rotationally-Consistent Novel View Synthesis for Humans](#)”,
in **ACM MM 2020**, Virtual (Acceptance: 472/1698 \approx 27.8%)
010. S. Woo, **Dahun Kim**, K. Park, J.Y. Lee, I.S. Kweon,
“[Align-and-Attend Network for Globally and Locally Coherent Video Inpainting](#)”,
in **BMVC 2020** (Acceptance: 195/670 \approx 29.1%)
009. **Dahun Kim***, S. Woo*, J.Y. Lee, I.S. Kweon,
“[Deep video inpainting](#)”,
in **CVPR 2019**, Long Beach, USA (Acceptance: 1294/5160 \approx 25.2%)
008. **Dahun Kim***, S. Woo*, J.Y. Lee, I.S. Kweon,
“[Deep blind video decaptioning by temporal aggregation and recurrence](#)”,
in **CVPR 2019**, Long Beach, USA (Acceptance: 1294/5160 \approx 25.2%)
[1st place winner of ECCV 2018 Chalearn LAP Video De-Captioning Challenge](#)
007. **Dahun Kim**, D. Cho, I.S. Kweon,
“[Self-supervised video representation learning with space-time cubic puzzles](#)”,
in **AAAI 2019** (**Oral - accept rate: 6.5%**), Honolulu, USA
006. Y. Jung, D. Cho, **Dahun Kim**, S. Woo, I.S. Kweon,
“[Discriminative feature learning for unsupervised video summarization](#)”,
in **AAAI 2019** (**Oral - accept rate: 6.5%**), Honolulu, USA
[Received Honorable Mention, 25th Samsung HumanTech Paper Award](#)
005. K. Park, S. Woo, **Dahun Kim**, D. Cho, I.S. Kweon,
“[Preserving Semantic and Temporal Consistency for Unpaired Video-to-Video Translation](#)”,
in **ACM MM 2019**, Nice, France (Acceptance: 252/936 \approx 26.9%)
004. Cho, Y. Jung, F. Rameau, **Dahun Kim**, S. Woo, I.S. Kweon,
“[Video Retargeting: Trade-off between Content Preservation and Spatio-temporal Consistency](#)”,
in **ACM MM 2019**, Nice, France (Acceptance: 252/936 \approx 26.9%)
003. S. Woo*, **Dahun Kim***, D. Cho, I.S. Kweon,
“[LinkNet: relational embedding for scene graph](#)”,
in **NeurIPS 2018**, Montreal, Canada (Acceptance: 1011/4856 \approx 20.8%)
002. **Dahun Kim**, D. Cho, D. Yoo, I.S. Kweon,
“[Learning image representations by completing damaged jigsaw puzzles](#)”,
in **WACV 2018** (**Oral**), Lake Tahoe, USA
001. **Dahun Kim**, D. Cho, D. Yoo, I.S. Kweon,
“[Two-phase learning for weakly supervised object localization](#)”,
in **ICCV 2017**, Venice, Italy (Acceptance: 621/2143 \approx 28.9%)

Patents

- P4. Electronic Device and Control Method of Same (US Patent App. 17/554,142)
- P3. Video Panoptic Segmentation (US Patent App. 16/852,647)
- P2. Panoptic Segmentation (US Patent 11,256,960)
- P1. Method and Device for Hierarchical Learning of Neural Network Based on Weakly Supervised Learning (US Patent App. 16/758,089)

Awards and Honors

- Best Ph.D. Thesis Award, EE, KAIST Apr.2022
- Bronze Award, 28th HumanTech Paper Award, Samsung Electronics Co., Ltd. (\$5,000) Feb.2022
- Qualcomm Innovation Award (Korea) 2021 Nov.2021
- Outstanding Reviewers Award, CVPR 2021 Aug.2021
- Outstanding Reviewers Award, ECCV 2020 Aug.2020
- Microsoft Research Asia (MSRA) Ph.D Fellowship 2019 Winner (\$10,000) Oct.2019
- 1-st Place Award in ChaLearnLAP 2018 Inpainting Challenge Track 2: video decaptioning (ECCV2018 Challenge) Sep.2018
- Global Ph.D Fellowship, National Research Foundation of Korea (National Minister fellowship – \approx \$60,000 + 3-year full scholarship) Mar.2018 - Feb.2021
- KAIST-Samsung Industry-University Cooperation, Best Paper Award (\$3,000) Jul.2020
- Bronze Award, 27th HumanTech Paper Award, Samsung Electronics Co., Ltd. (\$5,000) Feb.2021
- Honorable Mention, 25th HumanTech Paper Award, Samsung Electronics Co., Ltd. (\$2,000) Feb.2019
- Lab Student Representative (over 30 members), Sep.2019 - Jul.2020
- Bronze Prize, Best Paper Award, 31th IPIU Feb.2019
- International Computer Vision Summer School (ICVSS), Sicily, Italy Jul.2018

References

Prof. In So Kweon: M.S. - Ph.D. advisor at KAIST
KEPCO Chair Professor, Dept. of EE, KAIST; Eemail: iskweon77@kaist.ac.kr

Dr. Anelia Angelova: Collaborator at Google
Principal Research Scientist, Google DeepMind; Email: anelia@google.com

Dr. Weicheng Kuo: Collaborator at Google
Staff Research Scientist, Google DeepMind; Email: weicheng@google.com

Dr. Liang-Chieh Chen: Collaborator at Google
Manager and Research Scientist, ByteDance/TikTok (previously at Google); Email: lcchen@cs.ucla.edu

Dr. Joon-Young Lee: Collaborator at Adobe
Manager and Senior Research Scientist, Adobe Research; Email: jolee@adobe.com

Dr. Tsung-Yi Lin: Collaborator at Google
Principal Research Scientist, Nvidia (previously at Google); Email: tsungyilin87@gmail.com