Dawit Mureja Argaw

Ph.D. Candidate, EE, KAIST

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Research Interests

My research interests lie in the general areas of computer vision and deep learning with a particular focus on video-related topics including video restoration, video synthesis, video editing, long-form and multimodal video understanding, video summarization and video generation but not limited to.

Education

- **KAIST** — Daejeon, South Korea
  Integrated M.S./Ph.D. in Electrical Engineering — Sep 2018 - Sep 2024 (expected)
- **KAIST** — Daejeon, South Korea
  B.S. in Electrical Engineering; GPA: 3.9/4.3 (Magna Cum Laude) — Sep 2014 - Jul 2018

Research Experience

- **NVIDIA Research** — Santa Clara, CA
  Research Intern, Deep Imagination Research Group — Nov 2023 - Present
- **Adobe Research** — San Jose, CA
  Research Intern, Natural Language Group — May 2023 - Sep 2023
- **KAUST** — Saudi Arabia (Remote)
  Research Intern, Image and Video Understanding (IVUL) Lab — Nov 2022 - May 2023
- **Adobe Research** — San Jose, CA (Remote)
  Research Intern, Deep Learning Group — Aug 2021 - Nov 2021
- **KAIST** — Daejeon, South Korea
  Research Assistant, Robotics and Computer Vision (RCV) Lab — Sep 2018 - Sep 2023
- **KAIST** — Daejeon, South Korea
  Research Assistant, Multimodal AI (MMAI) Lab — Sep 2023 - Present

Publications

- *Scaling Up Video Summarization Pretraining with Large Language Models.* **CVPR**, 2024.
  Dawit Mureja Argaw, Seunghyun Yoon, Fabian Caba Heilbron, Hanieh Deilamsalehy, Trung Bui, Zhaowen Wang, Franck Dernoncourt, Joon Son Chung.
- *Towards Automated Movie Trailer Generation.* **CVPR**, 2024.
  Dawit Mureja Argaw, Mattia Soldan, Alejandro Pardo, Chen Zhao, Fabian Caba Heilbron, In So Kweon, Bernard Ghanem.
- *Long-range Multimodal Pretraining for Movie Understanding.* **ICCV**, 2023.
  Dawit Mureja Argaw, Fabian Caba Heilbron, Joon-Young Lee, Markus Woodson, In So Kweon.
- *The Anatomy of Video Editing: A Dataset and Benchmark Suite for AI-Assisted Video Editing.* **ECCV**, 2022.
  Dawit Mureja Argaw, Fabian Caba Heilbron, Joon-Young Lee, Markus Woodson, In So Kweon.
- *Long-term Video Frame Interpolation via Feature Propagation.* **CVPR**, 2022.
  Dawit Mureja Argaw, In So Kweon.
- *Motion-blurred Video Interpolation and Extrapolation.* **AAAI**, 2021.
  Dawit Mureja Argaw, Junsik Kim, Francois Rameau, In So Kweon.
- *Optical Flow Estimation from a Single Motion-blurred Image.* **AAAI**, 2021.
  Dawit Mureja Argaw, Junsik Kim, Francois Rameau, Jae Won Cho, In So Kweon.
- *Blurry Video Compression: A Trade-off between Visual Enhancement and Data Compression.* **WACV**, 2024.
  Dawit Mureja Argaw, Junsik Kim, In So Kweon.
- *Restoration of Video Frames from a Single Blurred Image with Motion Understanding.* **CVPR-W** (**Oral**), 2021.
  Dawit Mureja Argaw, Junsik Kim, Francois Rameau, Chaoning Zhang, In So Kweon.

- *Empirical study on using Adapters for debiased Visual Question Answering.* **CVIU**, 2023.
  Jae Won Cho, **Dawit Mureja Argaw**, Yeongtaek Oh, Dong-Jin Kim, In So Kweon.
- *LEMMS: Label Estimation of Multi-feature Movie Segments.* **ICCV-W**, 2023.
  Bartolomeo Vacchetti, **Dawit Mureja Argaw**, Tania Cequtelli.
- *ResNet or DenseNet: Introducing Shortcuts to ResNet.* **WACV**, 2021.
  Chaoning Zhang*, Philipp Benz*, **Dawit Mureja Argaw**, Seokju Lee, Junsik Kim, Francois Rameau, Jean Charles Bazin, In So Kweon.
- *DeePTZ: Deep Self-Calibration for PTZ cameras.* **WACV**, 2020.
  Chaoning Zhang, Francois Rameau, Junsik Kim, **Dawit Mureja Argaw**, Jean Charles Bazin, In So Kweon.
- *Revisiting Residual Networks with Nonlinear Shortcuts.* **BMVC** (**Spotlight**), 2019.
  Chaoning Zhang, Francois Rameau, Seokju Lee, Junsik Kim, Philipp Benz, **Dawit Mureja Argaw**, Jean Charles Bazin, In So Kweon.
- *Automatic spine segmentation from CT images using convolutional neural network via redundant generation of class labels.* **JCDE**, 2019.
  Malinda Vania*, **Dawit Mureja Argaw***, Deukhee Lee (*equal contribution).

Honors and Awards

- **Top Reviewer Award** 2023
  Conference on Neural Information Processing Systems (NeurIPS)
- **Outstanding Reviewer Award** 2023
  CVEU Workshop at ICCV
- **Outstanding Reviewer Award** 2023
  International Conference on Computer Vision (ICCV)
- **Best Poster Award** 2022
  What is Motion For? (WiMF) Workshop at ECCV
- **Outstanding Reviewer Award** 2022
  European Conference on Computer Vision (ECCV)
- **Finalist** 2023
  Qualcomm Innovation Fellowship Korea
- **Magna Cum Laude** 2018
  KAIST Electrical Engineering Department
- **Excellent Research Award** 2017
  KAIST Undergraduate Research Participation (URP)
- **Dean's List** 2015
  KAIST School of Freshman
- **KAIST Scholarship** 2014-Present
  Full scholarship for B.S., and Integrated M.S./Ph.D. programs

Academic Services

- **Reviewer**: ICML, ICLR, NeurIPS, CVPR, ICCV, ECCV, BMVC, WACV, TPAMI, ICRA
- **Student Volunteer**: ICLR 2020, ICML 2020, NeurIPS 2020