

Jae Won Cho

COMPUTER VISION RESEARCHER · ASSISTANT PROFESSOR

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Education

Korea Advanced Institute of Science and Technology (KAIST)

PH.D IN ELECTRICAL ENGINEERING

Supervised by Prof. In So Kweon

Daejeon, South Korea

Aug 2018 - Aug 2023

Georgia Institute of Technology

B.S. IN ELECTRICAL ENGINEERING

GPA: 3.5/4.0 (High Honor)

Atlanta, GA, USA

Aug 2014 - May 2018

Research Interest

My current research interests lie in the general areas of computer vision and deep learning with a particular focus Vision & Language Tasks such as Visual Question Answering and Active Learning.

Experience

Sejong University

ASSISTANT PROFESSOR

- Department of Artificial Intelligence and Data Science

Seoul, South Korea

Mar 2024 - present

KAIST, Multimodal AI Lab

POSTDOCTORAL RESEARCH ASSOCIATE

- Research on Computer Vision: Multi-modal AI, Video & Language

Daejeon, South Korea

Aug 2023 - Feb 2024

KAIST, Robotics and Computer Vision (RCV) Lab

RESEARCH ASSISTANT

- Research on Computer Vision: VQA, Active Learning

Daejeon, South Korea

Aug 2018 - Aug 2023

Projects

Object-centric Scene Understanding for Video Turing Test

KOREA MINISTRY OF SCIENCE AND ICT

Project Member/Lead: Developing a rich object-centric scene understanding framework for Video Turing Test based on Video Question Answering.

South Korea

Aug 2018 - Feb 2022

Biometric Door Lock

STANLEY BLACK & DECKER

Project Lead: Tasked with developing a WiFi channel state information based gait recognition for classification.

Atlanta, GA, USA

Oct 2017 - May 2018

Publications

- Youngtaek Oh, **Jae Won Cho**, Dong-Jin Kim, In So Kweon, Junmo Kim, “Preserving Multi-Modal Capabilities of Pre-trained VLMs for Improving Vision-Linguistic Compositionality.” International Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2024. (long, main)
- Jongbhin Woo, Hyeonggon Ryu, Youngjoon Jang, **Jae Won Cho**, Joon Son Chung, “Let Me Finish My Sentence: Video Temporal Grounding with Holistic Text Understanding.” ACM Multimedia (**MM**), 2024.
- Saelyne Yang, Jaesang Yu, **Jae Won Cho**, Juho Kim, “Fine-Grained Action Understanding with Tools in Instructional Videos.” CVPR Workshop on Learning from Procedural Videos and Language (**CVPRW**), 2024.
- **Jae Won Cho**, Dawit Mureja Argaw, Yeongtaek Oh, Dong-Jin Kim, In So Kweon, “Empirical study on using Adapters for debiased Visual Question Answering.” Computer Vision and Image Understanding (**CVIU**), 2023.

- **Jae Won Cho***, Dong-Jin Kim*, Yunjae Jung, In So Kweon, “Counterfactual Mix-Up for Visual Question Answering.” *IEEE Access*, 2023. (* equal contribution)
- **Jae Won Cho**, Dong-Jin Kim, Hyeonggon Ryu, In So Kweon, “Generative Bias for Robust Visual Question Answering.” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023. (*28th HumanTech Paper Award, Bronze Prize*)
- Youngjoon Jang, Youngtaek Oh, **Jae Won Cho**, Myungchul Kim, Dong-Jin Kim, In So Kweon, Joon Son Chung, “Self-Sufficient Framework for Continuous Sign Language Recognition.” *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2023 [**Oral**] [**top 3% recognition of all accepted papers**].
- Youngjoon Jang, Youngtaek Oh, **Jae Won Cho**, Dong-Jin Kim, Joon Son Chung, In So Kweon, “Signing Outside the Studio: Benchmarking Background Robustness for Continuous Sign Language Recognition.” *British Machine Vision Conference (BMVC)*, 2022.
- **Jae Won Cho***, Dong-Jin Kim, Yunjae Jung, In So Kweon, “MCDAL: Maximum Classifier Discrepancy for Active Learning.” *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2022. (* equal contribution)
- Chaoning Zhang, Philipp Benz, Adil Karjauv, **Jae Won Cho**, Kang Zhang, In So Kweon, “Investigating Top-k White-box and Transferable Black-box Attack.” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.
- Dong-Jin Kim*, **Jae Won Cho***, Jinsoo Choi, Yunjae Jung, In So Kweon, “Single-Modal Entropy based Active Learning for Visual Question Answering.” *British Machine Vision Conference (BMVC)*, 2021. (* equal contribution)
- Inkyu Shin, Dong-Jin Kim, **Jae Won Cho**, Sanghyun Woo, Kwanyong Park, In So Kweon, “LabOR: Labeling Only if Required for Domain Adaptive Semantic Segmentation.” *IEEE International Conference on Computer Vision (ICCV)*, 2021 [**Oral**](acceptance rate 3%).
- Antyanta Bangunharcana, **Jae Won Cho**, Seokju Lee, In So Kweon, Kyung-Soo Kim, Soohyun Kim, “Correlate-and-Excite: Real-Time Stereo Matching via Guided Cost Volume Excitation.” *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021.
- **Jae Won Cho**, Dong-Jin Kim, Jinsoo Choi, Yunjae Jung, In So Kweon, “Dealing with Missing Modalities in the Visual Question Answer-Difference Prediction Task through Knowledge Distillation.” *CVPR Multimodal Learning and Applications Workshop (CVPRW)*, 2021
- Dawit Mureja Argaw, Junsik Kim, Francois Rameau, **Jae Won Cho**, In So Kweon. “Optical Flow Estimation from a Single Motion-blurred Image.” *Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI)*, 2021.

Honors & Awards

2023	NICE Challenge, 2nd Place , NICE Workshop at CVPR 2023 (\$5,000 USD)	<i>Vancouver, Canada</i>
2022	28th HumanTech Paper Award, Bronze Prize , Samsung Electronics Co. Ltd (\$5,000)	<i>South Korea</i>
2018-Present	KAIST Scholarship , Full Scholarship for Ph.D Program	<i>KAIST, South Korea</i>
2018	Eta Kappa Nu (HKN), Beta Mu Chapter , Lifetime Membership	<i>Atlanta, GA, USA</i>
2018	High Honor , Georgia Institute of Technology Electrical Engineering	<i>Atlanta, GA, USA</i>
2017	Georgia Tech Faculty Honors , Perfect GPA Honors (Spring 2017)	<i>Atlanta, GA, USA</i>
2014, 2015, 2017	Georgia Tech Dean's List , (Fall 2017, Spring 2015, Fall 2014)	<i>Atlanta, GA, USA</i>
2017-2018	Scholarship of In-State- Tuition Waiver (\$10,000 USD) , Awarded based on GPA and need	<i>Atlanta, GA, USA</i>

Skills

Programming Languages:	Python, Matlab, C, Verilog, VHDL
Deep Learning	PyTorch, Caffe, TensorFlow, C3D
Languages	English (Native), Korean (Fluent), Chinese (Basic)
Miscellaneous	Autodesk Inventor, Solidworks, Microsoft Office, PSpice, LTspice, Matchcad, Multisim, ORCAD, Allegro.

References

Prof. In So Kweon

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Email: iskweon77@kaist.ac.kr

Prof. Joon Son Chung

SCHOOL OF ELECTRICAL ENGINEERING, KAIST
Email: joonsc@kaist.ac.kr

Prof. Dong-Jin Kim

DEPARTMENT OF DATA SCIENCE, HANYANG UNIVERSITY

Email: djdkim@hanyang.ac.kr