Manjin Kim

Position Ph.D Student

Department of Convergence IT Engineering

Pohang University of Science and Technology (POSTECH)

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Republic of Korea

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CITIZENSHIP

The Republic of Korea

BIRTHDAY

May 12th, 1995.

 $\operatorname{Research}$

Computer vision and deep learning,

Interests

especially, video action recognition and multi-modal representation learning

EDUCATION

Pohang University of Science and Technology (POSTECH), Pohang, Korea

Ph.D student (Unified master's and doctor's course)

Sep 2019 - now

- Advisor: Prof. Minsu Cho
- Anticipated graduation dates: Aug 2024

Pohang University of Science and Technology (POSTECH), Pohang, Korea

B.S. Degree

Mar 2013 – Aug 2019

- Major: Department of Creative IT Engineering
- Advisor: Prof. Sangwoo Kim

International Publications

Manjin Kim, Paul Hongsuck Seo, Cordelia Schmid, and Minsu Cho. "Learning correlation structures for vision transformers." CVPR. 2024.

Dayoung Kong, Junseok Lee, **Manjin Kim**, and Minsu Cho. "Future transformer for long-term action anticipation." *CVPR*. 2022.

Manjin Kim*, Heeseung Kwon*, Chunyu Wang, Suha Kwak, and Minsu Cho. "Relational self-attention: what's missing in attention for video understanding." *NeurIPS*. 2021.

* equal contribution

Heeseung Kwon*, **Manjin Kim***, Suha Kwak, and Minsu Cho. "Learning self-similarity in space and time as a generalized motion for action recognition." *ICCV*. 2021.

* equal contribution

Heeseung Kwon, **Manjin Kim**, Suha Kwak, and Minsu Cho. "MotionSqueeze: neural motion feature learning for video understanding." *ECCV*. 2020.

Industry Experience

Google Research, Grenoble, France

Student Researcher

Jul 2022 – Jan 2023

- Developed a multimodal long-form video captioning system.
- Mentor: Paul Hongsuck Seo

Microsoft Research Asia (MSRA), remote

Research Intern

Dec 2020 - June 2021

- Developed a dynamic neural feature transform method, called a relational self-attention.
- Mentor: Chunyu Wang

LG CNS, Seoul, Korea

Research Intern

Jun 2018 - Aug 2018

• Developed video data augmentation program using CycleGAN.

Joined Projects Motion-centric video representation learning (with Google Research)

• Developed vision transformers, dubbed StructViT, that effectively learn spatial(-temporal) correlation structures for both image and video understanding.

Online action detection in streamed videos (with POSCO ICT Company)

• Implemented real-time anomaly action recognition system for video surveillance.

Sentimental analysis on Hyundai vehicle models (with Hyundai Motor Company)

• Analyzed sentiment of Hyundai vehicle models from comments on web communities.

CERTIFICATES

Linux Master 1st class, Korea Association for ICT promotion,

May 2018

Industrial Engineer Information Processing,

Human Resources Development Service of Korea,

Dec 2017

MILITARY OBLIGATION The 1st Fighter Wings, Information & communication Battalion, Gwangju, Korea Staff Sergeant, the information security specialist

Apr 2016 – Apr 2018

• Carried out the obligatory duty of national defense.

Programming Languages Python, Java, C, C++, Pytorch, Tensorflow

LANGUAGE SKILLS Korean(native), English(advanced)

Referees

Minsu Cho, Professor

Department of Computer Science and Engineering

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