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## Research Interest\_

- Deep Learning, Natural Language Processing and Computer Vision.
- Interpretable AI system, Story Understanding and Graph Networks

### Publication\_\_\_\_

#### **Discovery of Natural Language Concepts in Individual Units**

ICLR 2019

SEIL NA, YO JOONG CHOE, DONG-HYUN LEE, GUNHEE KIM.

# Encoding Video and Label Priors for Multi-label Video Classification on YouTube-8M dataset

CVPR 2017 Workshop

SEIL NA, YOUNGJAE YU, SANGHO LEE, JISUNG KIM(SKT), GUNHEE KIM.

#### A Read-Write Memory Network for Movie Story Understanding

ICCV 2017

SEIL NA, SANGHO LEE, JISUNG KIM(SKT), GUNHEE KIM.

# Work Experience\_

**Kakaobrain** Seongnam, S.Korea

RESEARCH INTERN Jan. 2018 - Feb. 2018

- Advisor: Yo Joong Choe, Dong-Hyun Lee
- Conduct interpretable NLP research that explains what meaning intermediate representations have, how they are disentangled, how they vary with different layers, tasks, datasets, and training conditions.

#### **SNU Vision and Learning Laboratory**

Seoul, S.Korea

GRADUATE RESEARCH ASSISTANT

Mar. 2017 - Present

- Advisor: Prof. Gunhee Kim
- I studied the problem of Question Answering on Movie Story Contents. In MovieQA Public Dataset, we proposed Read-Write MemoryNet which improved the existing End-to-End MemoryNet and ranked 1st in 4 out of 6 tasks as of ICCV 2017 submission deadline. Our paper related with this work is accepted in ICCV 2017 as a Poster.
- I participated in Kaggle Google Cloud & YouTube-8M Video Understanding Challenge, proposed new Video Classification models, and ranked the 8th(top1.2%) in the challenge. Our paper related to this is accepted as oral presentation in CVPR 2017 Workshop for YouTube-8M Large-Scale Video Understanding.

#### **SNU Vision and Learning Laboratory**

Seoul, S.Korea

Undergraduate Research Assistant

Jan. 2016 - Feb. 2017

- Advisor: Prof. Gunhee Kim
- In order to solve Text Question Answering, I implemented and experimented several models including End-to-End MemoryNet and its variants.
- Transfer learning Faster-RCNN model from VOC dataset to ImageNet Dataset.

## Samsung Software Membership Program

Seoul, S.Korea

SOFTWARE DEVELOPER

Feb. 2015 - June. 2016

- I participated in the development of SugarDream; NeuralNet-based sleeping solution application.
- I participated in the development of FootMap navigation application that guides road by vibrating the sensor on shoes, and awarded the Excellence Prize at the Science Makers Battle Korea 2015.

# Honors & Awards \_\_

#### INTERNATIONAL

2017 **Google Travel Grants**, for ICCV 2017

Venice, Italy

2017 **2nd Prize**, MovieQA Video-based Answering Challenge

Venice, Italy

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### **DOMESTIC**

201520th Place, ACM-ICPC Daejeon RegionalDaejeon, S.Korea2015Excellent Prize, Science Makers Battle - KoreaDaejeon, S.Korea

# Education.

Seoul National University

Seoul, S.Korea

M.S. CANDIDATE IN COMPUTER SCIENCE AND ENGINEERING

Mar. 2017 - Present

• Advisor: Prof. Gunhee Kim (Vision and Learning Laboratory)

Hanyang University Seoul, S.Korea

Bachelor of Computer Science Engineering

Mar. 2013 - Feb. 2017

**Kyung-an High School** *Kyung-gi, S.Korea* 

Mar. 2010 - Feb. 2013