

Seil Na

RESEARCH SCIENTIST, LUNIT INC.

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Research Interest

My primary research interests lie in the area of deep learning, computer vision and natural language processing. Currently, I am working on a project that applies deep learning to finance.

Publication

Discovery of Natural Language Concepts in Individual Units of CNNs

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

Lunit Inc.

Seoul, S.Korea

RESEARCH SCIENTIST

Mar. 2019 - Present

- I'm working on Chest X-ray team, where the main goal is developing detection model of several abnormalities in chest radiography.
- Among several research approaches, I'm especially interested in training neural networks on large-scale dataset. For the platform that can effectively perform such large-scale experiments, I built a distributed learning system using horovod, introduced NVIDIA apex, and I'm also actively involved in server managements.

Kakao Brain

Seongnam, S.Korea

RESEARCH INTERN

Jan. 2018 - Feb. 2018

- Collaborators: 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 - Feb. 2019

- 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.
- I participated in Kaggle - Google Cloud & YouTube-8M Video Understanding Challenge, proposed new Video Classification models, and ranked the 8th (top 1.2%) 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.
- 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

DOMESTIC

2015 **20th Place**, ACM-ICPC Daejeon Regional

Daejeon,
S.Korea

2015 **Excellent Prize**, Science Makers Battle - Korea

Daejeon,
S.Korea

Education

Seoul National University

Seoul, S.Korea

M.S. CANDIDATE IN COMPUTER SCIENCE AND ENGINEERING

Mar. 2017 - Feb. 2019

- 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