



Kwangsoo Shin

SOFTWARE ENGINEER

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Career

Lunit Inc.

SOFTWARE DEVELOPER

Seoul, S.Korea

Aug. 2019 - Present

- Developer of Lunit INSIGHT Backend server
- Maintain RESTful API for finding lesions in chest, breast and mammography X-ray
- Designed new feature for visualization of deep learning models analysis result

Education

Sogang University

BACHELOR'S AND MASTER'S DEGREE, COMPUTER SCIENCE AND ENGINEERING

Seoul, S.Korea

Mar. 2011 - Aug. 2019

- Thesis: A CNN-based Place Classifier with Attention Method for Scene-level Place Recognition in Broadcasting Video
- Multimedia System Lab, Advisor Professor Jongho Nang

Skills

Programming Languages Proficient C/C++, Python

Platforms & Frameworks Intermediate PyTorch, Django

And Also Intermediate Docker/Docker Compose

Projects

Online Image Retrieval using Deep Learning

SOFTWARE ENGINEER

Sep. 2018 - Aug. 2019

- Developed Online contents based image retrieval system which is able to use in various domains such as fashion, clip-art and brand-logo
- Designed micro-service architecture for easily serving
- Implemented RESTful API server for application developers

The 2nd YouTube-8M Video Understanding Challenge

LEADER & SOFTWARE ENGINEER

Jul. 2018 - Aug. 2017

- Rank 44th from The 2nd YouTube-8M Video Understanding Challenge, Workshop on ECCV 2018 (Team name: sogang-mm)
- Approached video classification using various deep representations
- Trying to various tasks to keep the challenge competition rules
- Publications: *Approach for Video Classification with Multi-label on YouTube-8M Dataset*, <https://arxiv.org/abs/1808.08671>

Semi-automatic Video Tagging Tool for Video Turing Test

LEADER & SOFTWARE ENGINEER

Jan. 2018 - Aug. 2019

- Participated researcher of Division 3 for Video Turing Test grant funded by Korea Government(MSIT)
 - Development of QA system for video story understanding to pass Video Turing Test &
 - Data Collection and Automatic Tuning System Development for the Video Understanding
- Developed detection and recognition for semi-tagging
- Implemented RESTful API server to serving results which are consist of 3-DNN models for classifying actors, places and objects in video

Adult Web Site Detection

LEADER & SOFTWARE ENGINEER

Aug. 2017 - Dec. 2017

- Developed system which detects whether the site includes adult content or not
- Detected region of interest on web site using computer vision techniques
- Binary classification to merge each probability of adult content result using SVM

Large Scale Video Classification Challenge

RESEARCH ASSISTANT

Aug. 2017 - Oct. 2017

- Rank 8th from Large Scale Video Classification Challenge 2017, Workshop on ACM Multimedia 2017
- Designed deep learning models, which consists of the frame segment encoder, the feature extractor and the feature fusion layer

User-specific Home IoT Device Control through Face and Motion Recognition

LEADER & SOFTWARE ENGINEER

Jul. 2017 - Aug. 2017

- Participated the 3rd T-Hackathon held on SK Telecom with NVIDIA
- Developed deep learning models for recognizing face and motion using embedded machine NVIDIA Jetson TX2 board
- Designed to control home IoT device system

Detection and Avoidance of Pet Excrement in Robotic Vacuum Cleaner

SOFTWARE ENGINEER

Oct. 2016 - Nov. 2016

- Won 2nd prize from Consumer Electronics Hackathon held on Samsung Electronics SOSCON2016
- Developed object detection and avoidance algorithm in real time on Robot vacuum cleaner

Publications

INTERNATIONAL CONFERENCES

Approach for Video Classification with Multi-label on YouTube-8M Dataset

Munich, Germany

KWANGSOO SHIN, JUNHYEONG JEON, SEUNGBIN LEE, BOYOUNG LIM, MINSOO JEONG, JONGHO NANG

2018

- The 2nd Workshop on YouTube-8M Large-Scale Video Understanding, ECCV 2018

A New Frame Rate Up Conversion Quality Enhancement Method using Deep Convolutional Neural Network and Temporal Difference Map

Hong Kong, China

SANGCHUL KIM, SEUNGBIN LEE, KWANGSOO SHIN, JONGHO NANG

2016

- ICONI 2016

DOMESTIC CONFERENCES

A Design of Scalable Contents-based Image Retrieval System for Various Applications using Deep Learning

Pyeongchang, S.Korea

KWANGSOO SHIN, MINSOO JEONG, ROCK SAKONG, JONGHO NANG

2018

- KSC 2018

A Design of Image Analysis System with Docker using Multiple Deep Learning Frameworks and Its Performance Comparison

Jeju, S.Korea

KWANGSOO SHIN, MINSOO JEONG, HYEKYOUNG SEOK, JONGHO NANG

2018

- KCC 2018

An Adult Web Site Classification Method using Analysis of Multiple Images in Web Page

Busan, S.Korea

KWANGSOO SHIN, JINHA SONG, JONGHO NANG

2017

- KSC 2017

Analyzing Graphic Area of Video Screen for an Effective Summarization of Baseball Video

Jeju, S.Korea

KWANGSOO SHIN, JONGHO NANG

2017

- KCC 2017

An Effective Subtitle Detection Method using Temporal Accumulation of Video Frames

Pyeongchang, S.Korea

KWANGSOO SHIN, JONGHO NANG

2016

- KIISE 43rd Winter Conference

A Design of A Navigation Filter Integrated With A Magnetometer

Pyeongchang, S.Korea

KWANGSOO SHIN, BYUNGGYU AHN, CHONGSUCK RIM

2015

- KIISE 42nd Winter Conference

Awards

2018 **Rank 44th**, The 2nd YouTube-8M Video Understanding Challenge, Workshop on ECCV 2018

Munich, Germany

2018 **Best presentation paper**, KCC 2018

Jeju, S.Korea

2017 **Rank 8th**, Large Scale Video Classification, Workshop on ACM Multimedia 2017

Mountain View, U.S.A

2017 **Encouragement paper**, Undergraduate Paper Competition in KCC 2017

Jeju, S.Korea

2016 **Best presentation paper**, KIISE 43rd Winter Conference

Pyeongchang, S.Korea

2016 **2nd Prize**, Consumer Electronics Hackathon Robotic Vacuum Cleaner Part in Samsung Electronics SOSCON2016

Seoul, S.Korea

2015 **Excellence paper**, Undergraduate Paper Competition in KIISE 42nd Winter Conference

Pyeongchang, S.Korea