Kwangsoo **Shin**

Software Engineer

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Career

Lunit Inc.

Seoul, S.Korea

Software Developer — *Aug. 2019 - Present*

- Developed Backend services of Lunit INSIGHT
- RESTful API server for chest and breast X-ray analysis from deep learning models
- Designed new feature for visualization of machine model result

Education

Sogang University

Seoul, S.Korea

Bachelor's and Master's Degree, Computer Science and Engineering — *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*