Jin **Kim**

PH.D CANDIDAATE · YONSEI UNIVERSITY

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Summary

Research Interest: Computer vision, machine learning, effective computing

Current Focus: Vision-Language model, Domain Generalization, Meta-Learning, Memory Network, Semantic Segmentation

Education

Yonsei University — *Seoul, S.Korea*

PH.D. CANDIDATE IN SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING — *Mar. 2020 - Present*

- Supervised by Prof. Kwanghoon Sohn.

Yonsei University — *Seoul, S.Korea*

B.S. IN SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING — *Mar. 2013 - Feb. 2020*

- Full Scholarship by National S&T(Science & Technology)
- GPA : 3.91 / 4.5, Major course average : 4.2 / 4.5

Work Experience

Seoul Metropolitan Police Agency, Korea — *Seoul, S.Korea*

CYBERCRIME INVESTIGATION UNIT — *Feb. 2015 - Dec. 2016*

- Investigator as secondment of military service
- I was responsible for the development of automation required for the cyber criminals investigation such as illegal pornography sites with overseas servers(Link1), hacking(Link2), and making illegal personal information acquisition(Link3,Link4)

Publication

International Conference

"Pin the memory: Learning to Generalize Semantic Segmentation", CVPR'22 — ***paper, code***

JIN KIM, JIYOUNG LEE, JUNGIN PARK, DONGBO MIN, AND KWANGHOON SOHN — *June. 2022*

- IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)

"Self-balanced Learning for Domain Generalization", ICIP'21 — ***paper, code***

JIN KIM, JIYOUNG LEE, JUNGIN PARK, DONGBO MIN, AND KWANGHOON SOHN — *Sep. 2021*

- IEEE International Conference on Image Processing (ICIP)

Patent

"Semantic image segmentation apparatus and method using memory", (메모리를 이용하는 의미론적 영상 분할 장치 및 방법)

JIN KIM AND KWANGHOON SOHN — *Dec. 2021*

- Korean patent, 10-2021-0179588

Research Experience

Development of Complex Situational Awareness and Prediction Technology through Multi-modal Data Fusion and Social Artificial Intelligence — *Seoul, S.Korea*

FUNDED BY MINISTRY OF SCIENCE, MID-LEVEL RESEARCH. — *Mar. 2021 - Present*

- Developed an algorithm for computer vision with multi-modal data.

Development of AI systems that robustly and properly perform in novel environment that occur in open worlds — *Seoul, S.Korea*

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY, SOUTH KOREA — *Mar. 2020 - Feb. 2022*

- Developed algorithms for autonomous delivery robot that can robustly perform computer vision tasks in out-of-distribution situation.
- Developed an algorithms for domain generalization using meta-learning.

Development of ship detection model in satellite image domain. — *Seoul, S.Korea*

Ship detection challenge hosted by Agency for Defense Development of South Korea(LINK1) & DACON (LINK2) — *July. 2019 - Apr. 2020*

- Idea planning, code development and network tuning for this challenge.
- Github repository : Code

Development of building segmentation model in aerial image domain. — *Seoul, S.Korea*

Yonsei University, Dept. of Electrical and Electronic Engineering — *Mar. 2019 - July. 2019*

- Developed building segmentation model can robust perform in aerial image domain.

Teaching Assistant. — *Seoul, S.Korea*

Yonsei University, Dept. of Electrical and Electronic Engineering — *July. 2020 - Dec. 2021*

- Digital signal processing, Electrical and electronic engineering experiments: fundamentals., Capstone Design

Honors & Awards

2020 - Present	**Early Admission Scholarship,** by Dept. of Electrical and electronic engineering	*Yonsei University, S. Korea*
2020	**4th place / 383 entries,** DACON Ship Detection Challenge	*Agency for Defense Development, S. Korea*
2017, 2018	**Academic Excellence Honor,** by Dept. of Electrical and electronic engineering	*Yonsei University, S. Korea*
2013 - 2020	**Full scholarship for 4 years,** by National Science & Technology	*Korea Student Aid Foundation*
2016	**Seoul Metropolitan Police Agency Award Certificate,** by Commissioner General	*Korean National Police Agency*

Skills

Programming	Python, C/C++, JAVA, bash scripts, Matlab, VBA
Deep Learning	Pytorch, Tensorflow, Caffe
Web	Javascript, CSS, HTML5, Php

Extracurricular Activity

YFORM(Yonsei Forum Of Risk Management in Yonsei University LINK) — *Seoul, S.Korea*

Member — *Mar. 2017 - Mar. 2018*

- Gained expertise in probabilistic model of finance(ex. BSM formula) & risk management techniques.