Namyup **Kim**

PH.D. STUDENT @ COMPUTER VISION LAB.

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Research Interests

Computer Vision and Deep Learning
- Referring Image Segmentation
- Weakly Supervised Learning
- Domain Generalization and Adaptation

Education

Pohang University of Science and Technology (POSTECH) *Pohang, South Korea*
INTEGRATED M.S · PH.D STUDENT IN COMPUTER SCIENCE AND ENGINEERING *Mar. 2018 - Present*
- Advisor: Prof. Suha Kwak
- Cumulative GPA: 3.8 / 4.3

Soongsil University *Seoul, South Korea*
B.S. IN ELECTRONIC ENGINEERING *Mar. 2011 - Feb. 2018*
- Advisor: Prof. Dongsung Kim
- Cumulative GPA: 4.1 / 4.5

Experience

Microsoft Research Asia (MSRA), Remote *Beijing, China*
RESEARCH INTERN *Dec. 2020 - Jun. 2021*
- Researched on domain generalization for semantic segmentation and referring image segmentation.
- Mentor: Cuiling Lan

Computer Vision Lab, POSTECH *Pohang, South Korea*
RESEARCH ASSISTANT *Mar. 2018 - Present*
- Participate in research projects about weakly supervised semantic boundary detection and domain generalization.

Image Processing Lab, Soongsil University *Seoul, South Korea*
RESEARCH INTERN *Mar. 2016 - Feb. 2018*
- Developed software applications including automatic attendance, hidden camera detection and text contents/buttons rendering on a bird-eye view image

Software Maestro (funded by Korea Ministry of Knowledge and Economy) *Seoul, South Korea*
SOFTWARE ENGINEER TRAINEE *Jul. 2017 - Dec. 2017*
- Trainee completion: Built a system of detecting and reporting hidden cameras which is composed of app, detecting hardware and an announcement webpage.

EF International Language Centres *Bristol, UK*
LANGUAGE STUDY ABROAD *Jan. 2015 - Nov. 2015*
- Certificated of academic year abroad diploma.

5th Corps Headquarters *Pocheon, South Korea*
MILITARY OBLIGATION *Jan. 2013 - Oct. 2014*
- Carried out the obligatory duty of national defense.

Publication

- **Improving Cross-Modal Retrieval with Set of Diverse Embeddings** *2023*
  DONGWON KIM, NAMYUP KIM, AND SUHA KWAK
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

- **WEDGE: Web-Image Assisted Domain Generalization for Semantic Segmentation** *2023*
  NAMYUP KIM, TAEYOUNG SON, JAEHYUN PAHK, CUILING LAN, WENJUN ZENG, AND SUHA KWAK
  IEEE International Conference on Robotics and Automation (ICRA)

- **ReSTR: Convolution-free Referring Image Segmentation Using Transformers** *2022*
  NAMYUP KIM, DONGWON KIM, CUILING LAN, WENJUN ZENG, AND SUHA KWAK
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

- **Style Neophile: Constantly Seeking Novel Styles for Domain Generalization** *2022*
  JUWON KANG, SOHYUN LEE, NAMYUP KIM, AND SUHA KWAK
  IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

- **Learning to Detect Semantic Boundaries with Image-Level Class Labels** *2022*
  NAMYUP KIM*, SEHYUN HWANG*, AND SUHA KWAK (*EQUAL CONTRIBUTION)
  International Journal of Computer Vision (IJCV)

- **Urie: Universal image enhancement for visual recognition in the wild** *2020*
  TAEYOUNG SON, JUWON KANG, NAMYUP KIM, SUNGHYUN CHO, AND SUHA KWAK
  European Conference on Computer Vision (ECCV)

Patent

- **Input and Output System of Text According to Position on Image and the Method Thereof** *2018*
  NAMYUP KIM*, DONGWOO KIM, JIYOUNG YEON, HONGSUN YUN
  Korean Patent, KR1018284400000

Honors & Awards

2022	**NAVER Ph.D. Fellowship Award** , NAVER	*Seoul, S. Korea*
2022	**POSTECHIAN Fellowship Award** , POSETCH	*Seoul, S. Korea*
2022	**Qualcomm Innovation Fellowship South Korea** , Qualcomm	*Seoul, S. Korea*
2022	**The 2nd and 3rd Prize, NAVER $\times$ POSTECH AI DAY** , NAVER	*Pohang, S. Korea*
2020	**The Honorable Mention, Samsung Humantech Thesis Prize** , Samsung Electronics	*Suwon, S. Korea*
2016	**The Best Prize, The 14th Embedded Software Contest** , Ministry of trade industry and energy	*Seoul, S. Korea*
2016	**The Bronze Prize, Engineering Design Competition** , Soongsil University	*Seoul, S. Korea*
2011, 2012, 2017	**Academic Excellence Scholarship** , Soongsil University	*Seoul, S. Korea*

Reviewer

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**): 2023
- International Conference on Machine Learning (**ICML**): 2023
- Asian Conference on Computer Vision (**ACCV**): 2022

Invited Talk

- **Open Seminar: An Introduction of Referring Image Segmentation and its Recent Work** *Pankyo, South Korea*
  KAKAO BRAIN *Jul. 2022*

Teaching Experience

- **Teaching Assistant in External Courses**
  SK Hynix, Machine Learning Training Course (Nov. 2019)
- **Teaching Assistant in POSTECH**
  CSED290, Introduction to Computer Science & Engineering (Spring 2018)
  CSED261, Discrete Mathematics for Computer Science (Spring 2022)