Namyup **Kim**

PH.D. STUDENT @ COMPUTER VISION LAB.

Computer Vision Laboratory, POSTECH, 77 Cheongam-ro, Pohang, Geongbuk, South Korea 37673

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Research Interests

Computer Vision; Segmentation, Multimodal Learning, and Data-Efficient Learning

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

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

Experience

Tübingen AI Center, University of Tübingen   *Tübingen, Germany*
VISITING STUDENT RESEARCHER   *Mar. 2024 - May. 2024*
- Host: Prof. Seong Joon Oh

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

Computer Vision Lab, POSTECH   *Pohang, South Korea*
RESEARCH ASSISTANT   *Mar. 2018 - Present*
- Participate in research projects about multimodal learning, segmentation, and data-efficient learning.

Image Processing Lab, Soongsil University   *Seoul, South Korea*
RESEARCH INTERN   *Mar. 2016 - Feb. 2018*
- Developed software applications, including an automatic attendance system and a feature for rendering text content and buttons on a bird's-eye view image.

Software Maestro (funded by Ministry of Science and ICT)   *Seoul, South Korea*
8TH SOFTWARE ENGINEER TRAINEE   *Jul. 2017 - Dec. 2017*
- Built a system for detecting and reporting hidden cameras, composed of an app, detection hardware, and an announcement webpage.

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

Publication

- **FREST: Feature Restoration for Semantic Segmentation under Multiple Adverse Conditions**   *2024*
  SOHYUN LEE, NAMYUP KIM, SUNGYEON KIM, AND SUHA KWAK
  European Conference on Computer Vision (ECCV)

- **Shatter and Gather: Learning Referring Image Segmentation with Text Supervision** *2023*
  DONGWON KIM*, NAMYUP KIM*, CUILING LAN, AND SUHA KWAK (*EQUAL CONTRIBUTION)
  IEEE/CVF International Conference on Computer Vision (ICCV)

- **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) **(Highlight, 235/9155 = 2.5%)**

- **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, 1018284400000

Honors & Awards

2023	**BK21 Outstanding Paper Awards** , POSTECH	*Pohang, S. Korea*
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 Paper Award** , Samsung Electronics	*Suwon, S. Korea*
2016	**The Grand Prize, The 14th Embedded Software Contest** , Ministry of Trade Industry and Energy	*Seoul, S. Korea*

Academic Services

- **Conference Reviewer:** CVPR (2023, 2024), ICCV (2023), ECCV (2024), NeurIPS (2023, 2024), ICML (2023), ICLR (2024), WACV (2024), ACCV (2022, 2024)
- **Journal Reviewer:** TPAMI, IJCV

Invited Talk

- **Oral Presentation: Web-Image Assisted Domain Generalization for Semantic Segmentation** *Seoul, South Korea*
  SAMSUNG GLOBAL TECHNOLOGY SYMPOSIUM *Apr. 2023*

- **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)