SONG PARK

Google Scholar Github
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RESEARCH INTERESTS

I am interested in understanding how deep neural networks (DNNs) perceive, represent, and process diverse visual concepts—such as mood, emotion, style, and semantics—and their impact on decision-making. My research aims to uncover the underlying mechanisms behind these representations to develop more structured and expressive visual features. By enhancing the interpretability and robustness of learned representations, I seek to improve performance in real-world downstream tasks, including scene understanding, affective computing, and content generation.
To be specific, I have focused on the following research areas:

- **Text-to-Image Generative Models**
- **Visual Representation Learning**

EDUCATION

M.S. and **Ph.D.** in Integrated Technology — Mar 2016 - Feb 2022
Advisor: Prof. Hyunjung Shim
Yonsei University

B.S. in Integrated Technology — Mar 2013 - Feb 2016
Yonsei University

PUBLICATIONS

** indicates equal contribution.*

1. **Song Park***, Sanghyuk Chun*, Byeongho Heo, Dongyoon Han, "*DNNs May Determine Major Properties of Their Outputs Early, with Timing Possibly Driven by Bias*", arXiv preprint arXiv:2502.08167.

2. Sanghyuk Chun, Wonjae Kim, **Song Park**, Sangdoo Yun, "*Probabilistic Language-Image Pre-Training*", International Conference on Learning Representations (**ICLR**), 2025.

3. Jaehui Hwang, Dongyoon Han, Byeongho Heo, **Song Park**, Sanghyuk Chun, Jong-Seok Lee, "*Similarity of neural architectures using adversarial attack transferability*", European Conference on Computer Vision (**ECCV**), 2024.

4. Byeongho Heo, **Song Park**, Dongyoon Han, Sangdoo Yun, "*Rotary position embedding for vision transformer*", European Conference on Computer Vision (**ECCV**), 2024.

5. Minhyun Lee*, **Song Park***, Byeongho Heo, Dongyoon Han, Hyunjung Shim, "*SeiT++: Masked Token Modeling Improves Storage-efficient Training*", European Conference on Computer Vision (**ECCV**), 2024.

6. **Song Park**, Sanghyuk Chun, Byeongho Heo, Wonjae Kim, Sangdoo Yun, "*SeiT: Storage-efficient vision training with tokens using 1% of pixel storage*", International Conference on Computer Vision (**ICCV**), 2023.
https://github.com/naver-ai/seit

7. Sanghyuk Chun, Wonjae Kim, **Song Park**, Seong Joon Oh, Minsuk Chang, "*ECCV Caption: Correcting False Negatives by Collecting Machine-and-Human-verified Image-Caption Associations for MS-COCO*", European Conference on Computer Vision (**ECCV**), 2022.

8. **Song Park***, Sanghyuk Chun*, Junbum Cha, Bado Lee, Hyunjung Shim, "*Few-shot Font Generation with Weakly Supervised Localized Representations*", IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2021.

9. Sanghyuk Chun, **Song Park**, "*StyleAugment: Learning Texture De-biased Representations by Style Augmentation without Pre-defined Textures*", arXiv preprint arXiv:2108.10549.

10. **Song Park**, Sanghyuk Chun, Junbum Cha, Bado Lee, Hyunjung Shim, "*Multiple Heads are Better than One: Few-shot Font Generation with Multiple Localized Experts*", International Conference on Computer Vision (**ICCV**), 2021.
`https://github.com/clovaai/mxfont`

11. **Song Park***, Sanghyuk Chun*, Junbum Cha, Bado Lee, Hyunjung Shim, "*Few-shot Font Generation with Localized Style Representations and Factorization*", IEEE Conference on Computer Vision and Pattern Recognition Workshops (**CVPRW**), 2021 and AAAI Conference on Artificial Intelligence (**AAAI**), 2021.
`https://github.com/clovaai/lffont`

12. Joo Hyun Park*, **Song Park***, Hyunjung Shim, "*Semantic-aware neural style transfer*, Image and Vision Computing (**IMAVIS**), vol. 87, pp. 13-23, 2019.

13. Junsuk Choe*, **Song Park***, Kyungmin Kim*, Joo Hyun Park*, Dongseob Kim*, Hyunjung Shim, "*Face Generation for Low-Shot Learning Using Generative Adversarial Networks*", International Conference on Computer Vision Workshops (**ICCVW**), 2017.

RESEARCH EXPERIENCES

Research Scientist Jan 2022 - Present
NAVER AI Lab.

Visiting Researcher Sep 2020 - Sep 2021
NAVER AI Lab.
Mentor: Sanghyuk Chun

Research Intern Mar 2020 - Sep 2020
NAVER CLOVA
Mentor: Sanghyuk Chun, Junbum Cha, and Bado Lee

ACADEMIC ACTIVITIES

Research Presentations

- **"Few-shot Font Style Transfer with Localized Style Representations"** NAVER-HUST AI Seminar (2024).
- **"Storage-Efficient Vision Training with Tokens"**, Sogang University (2023).
- **"Few-shot Font Style Transfer with Localized Style Representations"**, Doctoral Consortium, KCCV (2022).

Reviewer

- **SIGGRAPH**(2022, 2024), **ICCV**(2023), **ECCV** (2024), **CVPR** (2024, 2025), **NeurIPS** (2024)

SCHOLARSHIPS

Full scholarship for Graduate School Mar 2016 - Feb 2020
Institute for Information and Communications Technology Promotion (IITP)

Full scholarship for Undergraduate School Mar 2013 - Feb 2016
Institute for Information and Communications Technology Promotion (IITP)