SONG PARK

Google Scholar Github
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RESEARCH INTERESTS

I am interested in interpreting and understanding visual concepts with multiple view points (e.g., mood, emotion, style, texture) to extract better visual representations for real-world downstream tasks.
To be specific, I have focused on the following research areas:

- **Representation Learning**
- **Image to Image Translation**
- **Style Transfer**

EDUCATION

Ph.D. candidate in Integrated Technology from **Yonsei University** Mar 2016 - Present
Advisor: Prof. Hyunjung Shim

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

PUBLICATIONS

** indicates equal contribution.*

1. **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
2. **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
3. Joo Hyun Park*, **Song Park***, Hyunjung Shim, "*Semantic-aware neural style transfer*, Image and Vision Computing (**IMAVIS**), vol. 87, pp. 13-23, 2019.
4. 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.

Under Review

1. **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.

RESEARCH EXPERIENCES

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

PROJECTS

Style Transfer Using Local Features May 2021 - Present

- Developing a style transfer method which can capture and utilize local features of images without semantic labels.

Few-shot Font Generation Mar 2020 - Apr 2021

- Generating a full font library with only a few reference glyphs.
- 2 papers are published: MX-Font (ICCV 2021) and LF-Font (AAAI 2021).
- 2 github repositories are available: `MX-Font`, `LF-Font`
- Working on unified few-shot font generation benchmark.

Self-supervised Deep Image Hashing Mar 2018 - Feb 2020

- Compressing the image data into binary codes while preserving the semantic similarity.

Image Completion for Restoring Blocked Areas Jul 2019 - Jan 2020

- Sponsored by Electronics and Telecommunications Research Institute (ETRI).
- Developed a module restores holes caused by blocking in Light-field and multi-viewpoint images.

Semantic Style Transfer Dec 2018 - Feb 2019

- Resolving "semantic mismatch" problems in existing style transfer methods utilizing segmentation map.
- 1 paper is published in IMAVIS, 2019.

Reconstructing Environment Map Nov 2017 - Feb 2018

- Predicting the surrounding environment map from a single image of the scene.

Face Generation and Recognition Mar 2017 - Oct 2017

- Augmenting the low-shot face dataset using GAN model to overcome limitations of low-shot learning.
- 1 paper is published in ICCVW, 2017.

Movie Poster Classification Mar 2016 - Feb 2016

- Training a deep model which classifies a movie poster into its genres.
- Crawled movie posters and their genres from web (`IMDb`).

SKILLS

Programming Languages & Frameworks (Selected)

- Programming Language: Python
- Machine learning tools: PyTorch, Tensorflow, OpenCV, NumPy, Scikit-learn.

SCHOLARSHIPS

Full scholarship for Graduate School Mar 2016 - Present
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)

TEACHING EXPERIENCES

Teaching Assistant
School of Integrated Technology, Yonsei University

- Software Project Sep 2017 - Dec 2017
- Database Sep 2016 - Dec 2016