Yizhe Zhu

Email : zyzflying@gmail.com
Mobile : (573)825-8455
Homepage: https://yzzhu0.github.io

SUMMARY

· 8+ years of combined research and engineering experience with deep expertise in computer vision, deep learning, machine learning, *etc.*

· In-depth knowledge of multi-modality problems (language and vision), deep generative model, disentangled representation learning, and self-supervised learning.

· Specialize in AIGC, with a particular focus on text-guided image/video generation and editing.

EDUCATION

Rutgers University *Jan. 2015 - May 2020*
Ph.D. in Computer Science GPA: 3.91/4.0
Specialties: Computer Vision, Machine Learning, Deep Learning
Advisor: Prof. Ahmed Elgammal

University of Missouri *Sep. 2013 - Dec. 2014*
Master of Science in Electronic & Computer Engineering GPA: 3.63/4.0
Specialties: Computer Vision, Image Compression
Advisor: Prof. Zhihai He

Shanghai University *Sep. 2009 - Aug. 2013*
Bachelor of Science in Electronics & Communication Engineering GPA: 3.47/4.0

WORKING EXPERIENCE

Bytedance AI Lab, CA
Senior Research Scientist Feb. 2022 - present
Research Scientist Aug. 2020 - Feb. 2022

· Conduct cutting-edge research and development in computer vision, machine learning and related fields;
· Investigate, prototype, and implement solutions to transfer advanced technologies to ByteDance products.
· Specialize in AIGC: work on large-scale text-to-image/video model training, and lead the research and application of downstream tasks.

NEC Labs America, Inc., NJ *Jun. 2019 - Dec. 2019*
Research Intern

· Invented a controllable video generation model with a sequential variational autoencoder(VAE) by disentangling appearance and motion representation in a self-supervised manner.

Hikvision Research Institute, CA *Jun. 2018 - Sep. 2018*
Research Intern

· Developed a conditional latent variable model to generate desirable image features based on class-level attributes, and an alternating back-propagation algorithm to optimize the model.
· Developed a multi-attention localization model for the object-part detection in a weakly-supervised manner, and provided enhanced visual features for Zero-Shot Learning.

SELECTED RESEARCH PUBLICATION

1. Daquan Zhou, Weimin Wang, Hanshu Yan, Weiwei Lv, **Yizhe Zhu**, Jiashi Feng. MagicVideo: Efficient Video Generation With Latent Diffusion Models. (arXiv:2211.11018)

2. Yufan Zhou, Bingchen Liu, **Yizhe Zhu**, Xiao Yang, Changyou Chen, Jinhui Xu. Shifted Diffusion for Text-to-image Generation. *International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2023

3. Bingchen Liu, **Yizhe Zhu**, Kunpeng Song, Ahmed Elgammal. Towards Faster and Stabilized GAN Training for High-fidelity Few-shot Image Synthesis. *International Conference on Learning Representations* (**ICLR**) 2021

4. **Yizhe Zhu**, Martin Renqiang Min, Asim Kadav, Hans Peter Graf. S3VAE: Self-Supervised Sequential VAE for Representation Disentanglement and Data Generation. *International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2020

5. Xingchao Peng, Zijun Huang, **Yizhe Zhu**, Kate Saenko. Federated Adversarial Domain Adaptation. *International Conference on Learning Representations* (**ICLR**) 2020

6. Bingchen Liu, **Yizhe Zhu**, Zuohui Fu, Gerard de Melo, Ahmed Elgammal. OOGAN: Disentangling GAN with One-Hot Sampling and Orthogonal Regularization. (**AAAI**) 2020

7. **Yizhe Zhu**, Jianwen Xie, Bingchen Liu, Ahmed Elgammal. Learning Feature-to-Feature Translator by Alternating Back-Propagation for Zero-Shot Learning. *International Conference on Computer Vision* (**ICCV**) 2019

8. **Yizhe Zhu**, Jianwen Xie, Zhiqiang Tang, Xi Peng, Ahmed Elgammal. Semantic-Guided Multi-Attention Localization for Zero-Shot Learning. *Neural Information Processing Systems* (**NeurIPS**) 2019

9. Zhiqiang Tang, Xi Peng , Tingfeng Li, **Yizhe Zhu**, Dimitris N Metaxas. AdaTransform: Adaptive Data Transformation. *International Conference on Computer Vision* (**ICCV Oral**) 2019

10. **Yizhe Zhu**, Mohamed Elhoseiny, Bingchen Liu, Ahmed Elgammal. A Generative Adversarial Approach for Zero-Shot Learning from Noisy Texts. *International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2018.

11. Zhiqiang Tang, Xi Peng, Shijie Geng, **Yizhe Zhu**, Dimitris Metaxas. CU-Net: Coupled U-Nets. *British Machine Vision Conference* (**BMVC Oral**) 2018.

12. **Yizhe Zhu**, Ahmed Elgammal. A Multilayer-Based Framework for Online Background Subtraction with Freely Moving Cameras. *International Conference on Computer Vision* (**ICCV**) 2017

13. Mohamed Elhoseiny*, **Yizhe Zhu***, Han Zhang, Ahmed Elgammal. Link the head to the beak: Zero Shot Learning from Noisy Text Description at Part Precision. *International Conference on Computer Vision and Pattern Recognition* (**CVPR**) 2017

***** means Co-first authors

ACADEMIC SERVICES

Reviewer for IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018 $\sim$ 2023
Reviewer for International Conference on Computer Vision (ICCV) 2019, 2021, 2023
Reviewer for European Conference on Computer Vision (ECCV) 2020, 2022
Reviewer for Neural Information Processing Systems (NeurIPS) 2022
Reviewer for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) Journal 2019
Reviewer for International Journal of Computer Vision (IJCV) Journal 2019

AWARDS, GRANTS, & HONORS

Student Travel Grant, US National Science Foundation (NSF)	2017 $\sim$ 2023
Research Assistant Scholarship	2018/2019
Teaching Assistant Scholarship	2016/2017
Excellent Student Award in SHU	2012
Recognition Award from Shanghai Innovation Experiment Program for University Students	2012
The First Prize Scholarship in SHU	2010 $\sim$ 2012