Jike Zhong

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Education

Ohio State University

08/2019 - 12/2022

B.S. in Computer Science

B.S. in Data Analytics (Statistics)

Advisor: Dr. Wei-Lun Chao

Johns Hopkins University

05/2023 - 09/2023

Visiting Researcher in Computer Science Dept.

Advisor: Dr. Alan Yuille

Publications & Preprints

P[1] **Jike Zhong***, Hong-You Chen*, Wei-Lun Chao, Making Batch Normalization Great in Federated Deep Learning

FL-NeurIPS 2023

P[2] Hong-You Chen*, **Jike Zhong***, Mingda Zhang, Xuhui Jia, Hang Qi, Boqing Gong, Wei-Lun Chao, Li Zhang, Learning Shareable Bases for Personalized Federated Image Classification

Submitted to IJCAI 2024

P[3] Cheng-Hao Tu*, Hong-You Chen*, Zheda Mai, **Jike Zhong**, Vardaan Pahuja, Tanya Berger-Wolf, Song Gao, Charles Stewart, Yu Su, Wei-Lun Chao, *Holistic Transfer: Towards Non-Disruptive Fine-Tuning with Partial Target Data*

NeurIPS 2023

P[4] Cheng Zhang, Tai-Yu Pan, Tianle Chen, **Jike Zhong**, Wenjin Fu, and Wei-Lun Chao, *Learning with Free Object Segments for Long-Tailed Instance Segmentation*

ECCV 2022

P[5] **Jike Zhong**, Yuxiang Lai, Ming Li, Yutong Bai, and Alan Yuille, Semantic Representation for Scalable Visual Self-Supervised Learning

Preprint, Technical Report

Industry Experiences

Data Science (Full-time), Salesforce (LLM Applications)	05/2023 -
Software Engineering (Intern), Salesforce (Capacity Forecast)	05/2022 - 08/2022
Software Engineering (Intern), Salesforce (Platform Engineering)	05/2021 - 08/2021

Research Experiences

Research Intern, JHU CCVL Lab

05/2023 -

- Advisor: Dr. Alan Yuille
- Project: Learning Object-Level Representation for Semantic Visual Self-Supervised Learning
- Desc: We explore leveraging semantic representation to assist better visual pre-training. It is known that current vision models do not have the same level of understanding and scalability as large language models (LLMs). To bridge this gap, I proposed using object-level instead of patch-level masking as the visual analogue of words in the masked image modeling (MLM) pipeline. This method yields surprisingly good scene understanding capability and improvements on downstream tasks such as VQA and classification.

Undergrad Researcher, OSU MLB Lab

11/2021 - 05/2023

- Advisor: Dr. Wei-Lun Chao
- Project: Representing client model as a combination of "bases" for personalized federated learning P[2]
- Project: Learning long-tailed instance segmentation with object co-segments P[4]
- Project: Analyzing and correcting BatchNorm failure in federated learning under non-iid setting P[1]
- Project: Proposing new learning problem: source-free class adaptation (holistic transfer) P[3]
- Project: Using Mixture of Expert (MoE) model to resolve intra-client variance in non-IID federated learning.

Undergrad Researcher, OSU Radar Lab

09/2020 - 11/2021

- Advisor: Dr. Seth Young
- Project: DV8 Developing algorithms and tools for flight path classification and clustering
- Project: NEXTOR III Modeling small airport capacity factors through Reinforcement Learning
- Desc: Poster Presentation: Zhengqi Zhu*, Jike Zhong*, Lang Xu*, Yifan Song, and Seth Young "Innovative Enhancements to Air Traffic Data Visualization Models"

Teaching

TA, CSE 3241 Database Systems, OSU	2022
TA, CSE 1223 Java Programming, OSU	2020-2021

Services

Conference Reviewer, CVPR ICCV	2023
Peer Mentor, OSU CSE Dept.	2021
Campus Ambassador, Salesforce at OSU	2021
President, Black Swan Investment Group at OSU	2021

Talks

Semantic Representation for Scalable Visual Self-Supervised Learning @CCVL Lab, JHU	2023
Rethinking Normalization in Federated Deep Learning @ICICLE, OSU	2023

Honors

Hackathon 1st place (topic: AI for cost savings in capacity planning, Salesforce)	2023
ASA DataFest 1st place (topic: AI for reducing misdiagnosis incidents, OSU)	2021
Engineering Honors	2021
Dean's List all semesters	2020
Entrepreneurship and Innovation Scholars	2019
American Invitational Mathematics Examination (AIME) Qualifier	2019

Skills

Tools: PyTorch, TensorFlow, Git

Programming Languages: Python, R, Matlab, C++