SIYUAN LI

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EDUCATION

Zhejiang University (ZJU) & Westlake University, China | Supervisor: Prof. Stan Z. Li   Sept 2021 - June 2026
PhD. Candidate of Computer Science and Technology

Nanjing University (NJU), China | Supervisor: Prof. Jianxin Wu   Sept 2017 - June 2021
Bachelor of Computer Science and Technology

PROJECTS & RESEARCH EXPERIENCE

Paper publication and projects during PhD. study and internship   July 2021 - Present

Published **14 papers** as first or co-first authors in top-tier conferences or journals, with **2174** citations (h index **25**) on Google Scholar. Developed 3 popular open-source projects for machine learning and computer vision in PyTorch.

- **OpenMixup**: Open mixup toolbox and benchmark for visual representation learning. **658 stars, 61 forks**
- **OpenSTL**: Open-source project for video prediction benchmarks (NeurIPS, 2023). **980 stars, 163 forks**
- **MogaNet**: Image classification and various downstream tasks of MogaNet (ICLR, 2024). **249 stars, 21 forks**

OPPO AI Center / Shanghai AI Lab (Cooperation): AIGC and Optimization   April 2025 - Present
Researching in Image Generation, Video Understanding, and LLM Optimizers.

BioMap Research (Internship): Biological Foundation Model and LLM   Jan 2025 - Sept 2025
Researching in DNA and Multi-omics Foundation Models, supervised by Researcher Qirong Yang.

Alibaba DAMO Academy (Internship): AIGC and Representation Learning   Aug 2023 - Sept 2024
Researching in AIGC for face and general images, supervised by Researcher Baigui Sun.

SELECTED PUBLICATIONS

Representation Learning and Generation (AIGC)

MergeVQ: A Unified Framework for Visual Generation and Representation with Disentangled Token Merging and Quantization   CVPR, 2025
Siyuan Li, Luyuan Zhang, Zedong Wang, Juanxi Tian, Cheng Tan, Zicheng Liu, Chang Yu, Qingsong Xie, Haonan Lu, Haoqian Wang, Zhen Lei[†]. � Code

Architecture-Agnostic Masked Image Modeling – From ViT back to CNN   ICML, 2023
Siyuan Li, Di Wu, Fang Wu, Zelin Zang, Stan Z. Li[†]. � Code

GenURL: A General Framework for Unsupervised Representation Learning   IEEE TNNLS, 2023
Siyuan Li, Zicheng Liu, Zelin Zang, Di Wu, Zhiyuan Chen, Stan Z. Li[†]. � Code

DLME: Deep Local-flatness Manifold Embedding   ECCV, 2022
Zelin Zang, **Siyuan Li**, Di Wu, Ge Wang, Lei Shang, Baigui Sun, Hao Li, Stan Z. Li[†]. � Code

Network Architecture and Long-Sequence Modeling

MogaNet: Multi-order Gated Aggregation Network   ICLR, 2024
Siyuan Li, Zedong Wang, Zicheng Liu, Cheng Tan, Haitao Lin, Di Wu, Zhiyuan Chen, Jiangbin Zheng, Stan Z. Li[†]. � Code

Short-Long Convolutions Help Hardware-Efficient Linear Attention to Focus on Long Sequences   ICML, 2024
Zicheng Liu, **Siyuan Li**, Li Wang, Zedong Wang, Yunfan Liu, Stan Z. Li[†]. � Code

Optimization for Large Language Models

Taming LLMs with Gradient Grouping   ACL, 2025
Siyuan Li, Juanxi Tian, Zedong Wang, Xin Jin, Zicheng Liu[†], Wentao Zhang, Dan Xu. � Code

Rep-MTL: Unleashing the Power of Representation-level Task Saliency for Multi-Task Learning (*Highlight*)   ICCV, 2025
Zedong Wang, **Siyuan Li**, Dan Xu[†]. � Code

Data Augmentations and Data-efficient Learning

SemiReward: A General Reward Model for Semi-supervised Learning ICLR, 2024
Siyuan Li, Weiyang Jin, Zedong Wang, Fang Wu, Zicheng Liu, Cheng Tan, Stan Z. Li[†]. ○ Code

Harnessing Hard Mixed Samples with Decoupled Regularizer NeurIPS, 2023
Zicheng Liu, **Siyuan Li**, Ge Wang, Cheng Tan, Lirong Wu, Stan Z. Li[†]. ○ Code

AutoMix: Unveiling the Power of Mixup for Stronger Classifiers *(Oral, Top 2.7%)* ECCV, 2022
Zicheng Liu, **Siyuan Li**, Di Wu, Zihan Liu, Zhiyuan Chen, Lirong Wu, Stan Z. Li[†]. ○ Code

AI for Science Applications

MergeDNA: Context-aware Genome Modeling with Dynamic Tokenization through Token Merging AAAI, 2026
Siyuan Li, Kai Yu, Anna Wang, Zicheng Liu, Chang Yu, Jingbo Zhou, Qirong Yang, Yucheng Guo,
Xiaoming Zhang, Stan Z. Li[†]. ○ Code *(Oral)*

VQDNA: Unleashing the Power of Vector Quantization for Multi-Species Genomic Sequence Modeling ICML, 2024
Siyuan Li, Zedong Wang, Zicheng Liu, Di Wu, Cheng Tan, Jiangbin Zheng, Yufei Huang, Stan Z. Li[†]

Spatial-Temporal Modeling (Video) Applications

SimVPv2: Towards Simple yet Powerful Spatiotemporal Predictive Learning TMM, 2025
Cheng Tan, Zhangyang Gao, **Siyuan Li**, Stan Z. Li[†]. ○ Code

OpenSTL: A Comprehensive Benchmark of Spatio-Temporal Predictive Learning NeurIPS, 2023
Cheng Tan, **Siyuan Li**, Zhangyang Gao, Wenfei Guan, Zedong Wang, Zicheng Liu, Lirong Wu,
Stan Z. Li[†]. ○ Code

TLPG-Tracker: Joint Learning of Target Localization and Proposal Generation for Visual Tracking IJCAI, 2020
Siyuan Li, Zhi Zhang[†], Ziyu Liu, Anna Wang, Linglong Qiu, Feng Du. ○ Code

Graph Representation Learning and Dimension Reduction

Discovering the Representation Bottleneck of Graph Neural Networks IEEE TKDE, 2024
Fang Wu, **Siyuan Li**, Stan Z. Li[†]. ○ Code

Invertible Manifold Learning for Dimension Reduction ECML, 2021
Siyuan Li, Haitao Lin, Zelin Zang, Lirong Wu, Jun Xia, Stan Z. Li[†]. ○ Code

SERVICES AND MEMBERSHIPS

Top-tier AI Conference Reviewer or PC Member 2022 - Present
*ICLR (2024-2026), ICML (2022-2025), NeurIPS (2022-2025), NeurIPS-DB (2023-2025), CVPR
(2022-2025), ICCV (2023, 2025), ECCV (2022, 2024), AAAI (2022-2026), IJCAI (2023), ACMMM
(2022-2025), BMVC (2024-2025), AISTATS (2024), WACV (2022-2026)*

Top-tier AI Journal Reviewer 2023 - Present
IEEE TPAMI, IJCV, IEEE TIP, IEEE TNNLS, IEEE TCSVT, NCA

Membership in Associations of Computer Science 2022 - Present
*IEEE Graduate Student Member, IEEE Young Professionals, China Society of Image and Graphics
(CSIG Student Member), China Computer Federation (CCF Student Member), Association for
Computational Linguistics Membership, British Machine Vision Association (BMVA Student Member)*

Teaching Assistant and Invited Talk 2023 - Present
- Teaching Assistant of Deep Learning Course at Westlake University (2024 Spring).
- Invited talk on Modern Convolutional Neural Networks at Chengdu Institute of Computer Application, Chinese Academy of Sciences (2024/03/27).
- Online talk on Convolution Kernel Design and Gated Attention for Modern Convolutional Neural Networks at ShuZiHuanYu Platform (2024/03/12).

Scholarships and Social Awards 2021 - Present
Westlake University Bode Scholarship (2025), Westlake University Suwu Scholarship (2024)
CVPR'25 BP Participant Award, ICML'24 Financial Aid Award, ICLR'24 Financial Assistance Award