

Shuguang Dou

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EDUCATION

Tongji University	Sep 2020 - Jun 2024
Computer Science Doctor	
University of Shanghai for Science and Technology	Sep 2017 - Apr 2020
Mechanical Engineering Master	
University of Shanghai for Science and Technology	Sep 2013 - Jun 2017
Mechanical Design, Manufacturing and Automation Bachelor	

ABOUT & RESEARCH INTEREST

I am a four-year PhD student and luckily advised by the brilliant and kind researcher Prof. [Cairong Zhao](#). I am passionate about deep learning research in the following topics:

Video Surveillance: Occluded Person Re-identification, Person Search

Segmentation: Human Co-parsing, Weakly Supervised and Unsupervised Segmentation

Classification: Hyperspectral Image Classification, 3D Point Cloud Classification

Currently I base my research topics on emerging abilities in foundation models.

I am always grateful to those more senior who have a deep understanding of these topics for their advice. Besides, I am always willing to collaborate with people who are also interested in relevant issues and provide corresponding guidance to younger students (undergrad or master).

PUBLICATION

Research Direction 1-Occluded and Privacy-Preservation Person Re-identification

- [1] (IEEE T-IP 2023, CCF A, **First Author**) Human Co-Parsing Guided Alignment for Occluded Person Re-identification
- [2] (IEEE T-IP 2021, CCF A, **Co-first Author**) Incremental Generative Occlusion Adversarial Suppression Network for Person ReID
- [3] (IEEE T-CSVT 2023, CCF B, *In Peer Review*, **First Author**) Person Identify Shift for Privacy-Preserving Person Re-identification

Research Direction 2 - Energy-Aware Hyperparameters and Network Architecture Search Benchmarks

- [4] (ICLR 2023, **Spotlight Oral Presentation**, **First Author**) EA-HAS-Bench: Energy-Aware Hyperparameter and Architecture Search Benchmark

Research Direction 3-SVG Vector Graphics Understanding and Reverse Engineering

- [5] (IEEE T-PAMI 2023, CCF A, *In Peer Review*, **First Author**) YOLaT++: Recognizing Vector Graphics without Rasterization and A New Dataset

Research Direction 4 - 3D Convolution-Based Hyperspectral Image Classification

- [6] (Remote Sensing 2019, SCI Q1, **First Author**) Alternately Updated Spectral-Spatial Convolution Network for the Classification of Hyperspectral Images
- [7] (Remote Sensing 2018, SCI Q1, **ESI Highly Cited Paper Top1%, First Author**) A Fast Dense Spectral-Spatial Convolutional Network Framework for Hyperspectral Image Classification

Collaborative Project Direction-X-ray Detection, Person Search, and Privacy for Person Re-identification, Model Regularization, Chart Animation and Time Series

- [8] (IEEE T-IFS 2022, CCF A, Third Author) Detecting Overlapped Objects in X-ray Security Imagery by a Label-aware Mechanism
- [9] (IEEE T-CSVT 2022, CCF B, Third Author) Context-Aware Feature Learning for Noise Robust Person Search.
- [10] (SCIENCE CHINA: INFORMATION SCIENCE 2021, Chinese CCF A, Third Author) Intelligent Video Surveillance: A Review of Person Re-recognition Research.
- [11] (AAAI 2023, **Oral**, CCF A, Fifth Author) Similarity Distribution based Membership Inference Attack on Person

Reidentification.

[12] (IEEE T-IFS 2023, CCF A, *Major Revision*, Third Author) Invisible Backdoor Attack with Dynamic Triggers against Person Reidentification

[13] (IJCV 2023, CCF A, *Minor Revision*, Third Author) Adaptive Discriminative Regularization for Visual Classification

[14] (IJCV 2023, CCF A, *In Peer Review*, Third Author) Re-ID-leak: Membership Inference Attacks Against Person Re-Identification

[15] (IEEE T-VCG 2023, CCF A, *In Peer Review*, Fourth Author) Reviving Static Charts into Live Charts

[16] (AAAI 2024, CCF A, *submitted*, Third Author) Unraveling Spatial-Temporal and Out-of-Distribution Patterns for Multivariate Time Series Classification

INTERNSHIP EXPERIENCE

Microsoft Research Asia (Shanghai)

Nov 2021 - May 2023

Research Intern (Advisor: Senior Researcher Xingyang Jiang) Machine Learning Group

Shanghai

Research Project 1-Low Carbon: Energy-Aware Hyperparameter and Architecture Search Benchmark (Accepted by ICLR23 Spotlight)

Provides the first large-scale benchmark of a joint architecture/hyperparameter search space containing over 10 billion configurations, covering a wide range of configurations associated with search energy costs.

Research Project 2-YOLaT++: Recognizing Vector Graphics without Rasterization and A New Dataset (Submitted to IEEE T-PAMI)

Proposed an efficient end-to-end graph-based method that does not require the conversion of vector graphics to raster graphics, but instead defines the predicted objects from raw text. A new vector graph-based benchmark for large-scale graph understanding (VGCU) is constructed.

Research Project 3-Privacy: Privacy-preserving Person Re-identification (ArXiv, Submitted to IEEE T-CSVT)

A new de-identification approach is proposed to trade-off privacy-preserving and data availability.

Research Project 4- SVG-based Chart Understanding: Live Charts (Collaborative Project, Submitted to IEEE T-VCG)

Given a static SVG-based chart, it is restored to a dynamic chart based on computer vision techniques and LLM to tell the story better and capture the user's attention.

HONORS & AWARDS

China National Scholarship of Graduate Student

2019

Second Prize in National Graduate Student Mathematical Modeling Competition

2019

National Inspirational Scholarship

2016

ACADMIC SERVICES

- **Conference Reviewer / Program Committee:** ICML (2022, 2023), NeurIPS (2022, 2023), ICLR (2024), ICIG (2023)
- **Journal Reviewer:** IET Image Processing, PFG, Infrared Physics & Tech, and Chinese Science: Information Science.

MISC

- I am a big fan of Japanese manga artist Tatsuki Fujimoto. I love his works Fire Punch and Chainsaw Man.
- Love watching a lot of Bilibili videos and record life or edit videos and upload them to Bilibili.
- Enjoy participating in meaningful social activities (connect with the community).
- Dream to be a novelist author.