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 computer vision research in the following topics:

Video Surveillance: Trustworthy Person Re-identification-Robust, Security, and Privacy-Preserving

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 interested in relevant issues and provide corresponding guidance to younger students (undergrad or master).

PUBLICATION

Research Direction 1-Trustworthy Person Re-identification: Robust, Security, and Privacy-Preserving

[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

[4] (**AAAI 2023, Oral, CCF A**, Fifth Author) Similarity Distribution based Membership Inference Attack on Person Reidentification.

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

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

[7] (IEEE T-CSVT 2022, CCF B, Third Author) Context-Aware Feature Learning for Noise Robust Person Search.

[8] (SCIENCE CHINA: INFORMATION SCIENCE 2021, Chinese CCF A, Third Author) Intelligent Video Surveillance: A Review of Person Re-identification Research.

Research Direction 2 - Microsoft Research Projects: Low Carbon and Infographics Understanding

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

[10] (**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

[11] (Remote Sensing 2019, SCI Q1, **First Author**) Alternately Updated Spectral-Spatial Convolution Network for the Classification
of Hyperspectral Images

[12] (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, Model Regularization, LLM for VIS and Time Series

[13] (**IEEE T-IFS 2022**, **CCF A,** Third Author) Detecting Overlapped Objects in X-ray Security Imagery by a Label-aware Mechanism
[14] (**IJCV 2023**, **CCF A**, *Minor Revision*, Third Author) Adaptive Discriminative Regularization for Visual Classification
[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 Learining 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- 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.