Shuguang Dou

+86-13818347625 | dousg@tongji.edu.cn
WeChat: CesareDou | https://shuguang-52.github.io/

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

[18] (**CVPR 2024, CCF A**, *Submitted*, **First Author**) DROP: Decouple Re-Identification and Human Parsing with Task-specific Features for Occluded Person Re-identification

[15] (**IJCV 2024**, **CCF A,** *Major Revision*, Third Author) Re-ID-leak: Membership Inference Attacks Against Person Re-Identification

[12] (SCIS 2024, **CCF A,** *Major Revision*, **First Author**) Person Identify Shift for Privacy-Preserving Person Re-identification

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

[8] (**AAAI 2023, Oral, CCF A**, Fifth Author) Similarity Distribution based Membership Inference Attack on Person Re-identification.

[7] (**IEEE T-IP 2023**, **CCF A, First Author**) Human Co-Parsing Guided Alignment for Occluded Person Re-identification

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

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

[3] (**IEEE T-IP 2021, CCF A, Co-first Author**) Incremental Generative Occlusion Adversarial Suppression Network for Person ReID

Research Direction 2 - Microsoft Research Projects: EA-NAS and Infographics Understanding

[19] (**IEEE T-PAMI 2024, CCF A**, *Submitted*, **First Author**) EA-HAS-Bench and Language-Enhanced Shrinkage for Neural Architecture Search

[14] (**IEEE T-PAMI 2024, CCF A**, *Mojar Revision*, **First Author**) Hierarchical Recognizing Vector Graphics and A New Chart-based Vector Graphics Dataset

[13] (**IEEE T-VCG 2024**, **CCF A**, Fourth Author) Reviving Static Charts into Live Charts

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

Research Direction 3 - AI for Science

[17] (Journal of Hazardous Materials 2024, SCI Q1, Second Author) Machine learning-assisted assessment of key meteorological and crop factors affecting historical mulch pollution in China

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

of Hyperspectral Images

[1] (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, and Time Series

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

[11] (**IJCV 2024**, **CCF A**, *Accept with Minor Revision*, Third Author) Adaptive Discriminative Regularization for Visual Classification

[5] (**IEEE T-IFS 2022, CCF A**, Third Author) Detecting Overlapped Objects in X-ray Security Imagery by a Label-aware Mechanism

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 (One Accepted by ICLR23 Spotlight, One submitted to IEEE T-PAMI)
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-Hierarchical Recognizing Vector Graphics and A New Chart-based Vector Graphics 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, Accepted by 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:**
  - IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**) 2024
  - Neural Information Processing Systems (**NeurIPS**) 2022, 2023
  - International Conference on Machine Learning (**ICML**) 2022, 2023, 2024
  - International Conference on Learning Representations (**ICLR**) 2024
  - International Conference on Image and Graphics (ICIG) 2023

- **Journal Reviewer:**
  - IEEE Transactions on Circuits and Systems for Video Technology (**T-CSVT**)
  - IEEE Transactions on biometrics, behavior, identify science (T-BIOM)
  - IET Image Processing
  - PFG- Journal of Photogrammetry, Remote Sensing and Geoinformation Science
  - Infrared Physics & Tech
  - 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.