Wenxin Su

@ suwenxin43@gmail.com | ♠ GitHub | ♠ Personal Website | ♠ Google Scholar | ♣ Supervisor: Dr. Anna Kreshuk Research Interests: Computer Vision; Transfer Learning; Medical Image Analysis

Education & Professional Experience

European Molecular Biology Laboratory (EMBL)

• Ph.D. Candidate, Biological Image Analysis

Heidelberg, Germany

Sep 2025 - Present

University of Shanghai for Science and Technology (USST)

Shanghai, China

• Master Student, Biomedical Engineering; GPA: 3.9/4.0

Sep 2022 - Jue 2025

• Selected Coursework: Numerical Analysis, Machine Learning, Methods of Statistics, Medical Image Processing and Analysis, Medical Information System and Network Technology, Basic Medicine, Biomechanics

Chengdu Aosailixing Information Technology Service Co., Ltd.

Chengdu, China

• Data Analyst

 $Mar\ 2021-Apr\ 2022$

• Responsibilities: Build machine learning models to analyze data

Halmstad University

Halmstad, Sweden

• Exchange Student; Computer Science

Sep 2018 - Feb 2019

• Selected Coursework: Computer Networks, Linux administration

Jincheng College of Sichuan University

Chengdu, China

• B.S., (Honor); Internet of Things Engineering GPA: 87.5/100

Sep 2017 - Jun 2021

• Selected Coursework: Calculus, Linear Algebra, Probability and Statistic, Discrete Mathematics, JAVA Programming, Data Structure, Neural Network and Deep Learning, Database Principles and Applications, Data Mining

Publications & Manuscripts

- [1] Wenxin Su, Song Tang, Xiaofeng Liu, Xiaojing Yi, Chunxiao Zu, Mao Ye, Jiahao Li, Xiatian Zhu. Domain Adaptive Diabetic Retinopathy Grading with Model Absence and Flowing Data. Accepted by CVPR 2025 | Papar
 - Addressed the domain adaptation problem in diabetic retinopathy grading under challenging clinical settings.
 - Analyzed the feasibility of the method theoretically and given two new theorems.
 - Drafted the original version of the paper and conducted experiments to validate and analyze the proposed method.
- [2] Song Tang, Wenxin Su, Mao Ye, and Xiatian Zhu. Proxy Denoising for Source-Free Domain Adaptation. Accepted by ICLR 2025 $\overline{(oral, acceptance \ rate \approx 1.8\%) \mid Papar}$
 - Based on [3], designed and implemented an innovative method to correct the ViL model's predictions under the guidance of a proxy confidence theory.
 - Drafted the original version of the paper and conducted experiments to validate and analyze the proposed method.
- [3] Song Tang, Wenxin Su, Mao Ye, and Xiatian Zhu. Source-free domain adaptation with frozen multimodal foundation model. Accepted by CVPR 2024 | Papar
 - Designed a method for knowledge distillation from a vision-language model to enhance model adaptation.
 - Drafted the original version of the paper and conducted experiments to validate and analyze the proposed method.
- [4] Song Tang, Wenxin Su, Yan Yang, Lijuan Chen, and Mao Ye. Model adaptation via credible local context representation. Accepted by CAAI Transactions on Intelligence Technology. 2023. (IF: 8.4) | Papar
 - Developed an innovative method for identifying credible local contexts within the feature space.
 - Created table and figures and conducted experiments to validate and analyze the proposed method.
- [5] Song Tang, Wenxin Su, Mao Ye, Jianwei Zhang and Xiatian Zhu. Unified source-free domain adaptation. Submitted to IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI, IF: 20.8) [Major Revision] | Papar
 - Designed and developed a novel approach to uncover causal relationships between latent variables and model decisions, providing a unified solution to the source-free domain adaptation problem.
 - Drafted the original version of the paper and conducted experiments to validate and analyze the proposed method.
- [6] Song Tang, Chunxiao Zu, Wenxin Su, Yuan Dong, Mao Ye, Jianwei Dr. Zhang, Xiatian Zhu. Is Foreground Prototype Sufficient? Few-Shot Medical Image Segmentation with Background-Fused Prototype. | Papar
 - Conducted some experiment to validate and analyze the proposed method and helped create figures.

Source-free Domain Adaptation

Supervised by Dr.Song Tang (USST)

Apr 2022 - Present

- * Utilized both internal and external auxiliary information to improve model adaptation.
- * Established causal relationships to develop a unified solution for the source-free domain adaptation problem.
- * Four papers have been submitted for this research, with two accepted (one accepted by CVPR 2024) and two currently under review.

Diabetic Retinopathy Grading

Remote collaboration with Dr. Xiaofeng Liu (Yale University)

Jul 2024 - Present

- * Proposed a novel transfer setting, which is closer to real-world clinical.
- * Developed a new approach, GUES, for addressing the domain adaptation problem in diabetic retinopathy grading, based on the theory of generative unadversarial examples, eliminating the reliance on labels and models.
- * Completed a paper based on the above and submitted it to CVPR 2025.

RESEARCH PROJECT

Unified Source-Free Domain Adaptation framework (204 stars) | GitHub

Apr 2024 - Present

* Independently designed and implemented the first unified source-free domain adaptation (SFDA) framework project based on PyTorch. The project includes the 10 most mainstream SFDA methods from 2020 to 2024, such as SHOT, NRC, COWA, AdaContrast, PLUE, and our team's LCFD, DIFO, TPDS, SCLM, and GKD.

ACADEMIC SERVICE

- Served as a reviewer for AAAI 2024, ICLR 2025, and ICME 2025.
- Presented a talk at the CVPR 2024 poster session.

Selected Honor & Awards

First Prize Scholarship at University of Shanghai for Science and Technology ${f Top~} 5\%$	2024
National Scholarship for Postgraduates Top 1%	2023
Excellent Student of Jincheng College of Sichuan University $\mathbf{Top}\ 1\%$	2021
Second Prize Scholarship at Jincheng College of Sichuan University $\mathbf{Top}\ 20\%$	2019
Achieved first place in the Women's 400m Race at Jincheng College of Sichuan University $\mathbf{Top}\ 1$	2018

SKILLS

• Programming and others: Python, PyTorch, C, R, Data Visualization, Latex, Kettle, MySQL

Hobbies

Hiking, Running, Cycling, Travel, Video Game