Suncheng Xiang

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https://JeremyXSC.github.io/

RESEARCH INTERESTS

Machine Learning and Computer Vision
Image Retrieval, Person Re-Identification, Representation Learning
Domain Adaptation, Image Generation, Generative Adversarial Network

EDUCATION

Shanghai Jiao Tong University — Shanghai, China
Ph.D in Computer Science and Technology — Sep 2017 – Present

National University of Defense Technology — Changsha, China
M.S in Software Engineering — Sep 2014 – Jul 2017

Changsha University of Science & Technology — Changsha, China
B.S in Electrical Engineering and Automation — Sep 2010 – Jul 2014

PUBLICATIONS

[1] *Deep Unsupervised Progressive Learning for Distant Domain Adaptation*
IEEE International Conference on Tools with Artificial Intelligence (**ICTAI**), 2019. (Oral)
Suncheng Xiang, Yuzhuo Fu, Ting Liu

[2] *Unsupervised Person Re-Identification by Hierarchical Cluster and Domain Transfer*
Multimedia Tools and Applications (**MTA**), 2020.
Suncheng Xiang, Yuzhuo Fu, Mingye Xie, Zefang Yu, Ting Liu

[3] *Unsupervised Domain Adaptation Through Synthesis for Person Re-Identification*
IEEE International Conference on Multimedia and Expo (**ICME**), 2020.
Suncheng Xiang, Yuzhuo Fu, Guanjie You, Ting Liu

[4] *Progressive Learning with Style Transfer for Distant Domain Adaptation*
IET Image Processing (**IET-IPR**), 2020.
Suncheng Xiang, Yuzhuo Fu, Ting Liu

[5] *Multi-level Feature Learning with Attention for Person Re-Identification*
Multimedia Tools and Applications (**MTA**), 2020.
Suncheng Xiang, Yuzhuo Fu, Hao Chen, Wei Ran, Ting Liu

[6] *Taking a Closer Look at Synthesis: Fine-grained Attribute Analysis for Person Re-Identification*
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2021.
Suncheng Xiang, Yuzhuo Fu, Guanjie You, Ting Liu

PATENTS

A Method, Equipment and Storage Medium for Re-Identification of Inland Water Vessels Based on Transfer Learning
CN111259812A,2020-06-09

Yuzhuo Fu, Ting Liu, **Suncheng Xiang**

AWARDS

- Leo KoGuan Scholarship, SJTU, 2019-2020
- Merit Student, SJTU, 2018-2019
- First-class Academic Scholarship, NUDT, 2016-2017
- Outstanding Student, NUDT, 2014-2015
- Third-class Academic Scholarship, Outstanding League Cadres, CSUST, 2012-2013
- First-class Academic Scholarship, Merit Student, Model Student of Academic Records, CSUST, 2011-2012
- Third-class Academic Scholarship, Excellent League Member, CSUST, 2010-2011

PROFESSIONAL ACTIVITIES

Journal Review

IET Image Processing

IEEE Access

Signal Processing: Image Communication

Program Committees

Session Chair of ICTAI 2019

SKILLS

Programming: Python, MATLAB, C/C++
Deep Learning: Pytorch, TensorFlow, Caffe

PROJECTS

Unsupervised Domain Adaptation for Person Re-Identification

- The purpose of this project is to learn a discriminative and robust model for cross-domain person re-identification, under both open set and closed set scenarios. This problem is important since manually collecting a large-scale dataset is time-consuming and labor-intensive.
- We propose several new **part alignment, style transfer** and **co-teaching** methods to further boost the performance of cross-domain re-identification. Besides, a large-scale synthetic dataset (*FineGPR*) is constructed based on GTA5 game engine for generalizable re-identification task, which provides fine-grained and accurately configurable attribute annotations.

Learning Behavior Analysis in Classroom Based on Deep Learning

- Classroom behavior analysis is significant for automatic evaluation of the classroom teaching.
- This project uses deep learning algorithms to recognize students' behavior in the classroom, and obtains meaningful statistical results for classroom teaching analysis. On this basis, several key technical indicators on the quality of classroom listening are constructed.

Research on Key Technologies of Accurate and Fast Structure-level Soft Error Quantification

- It is very important to analyze the structure-level soft errors of the chip.
- This project constructs a set of highly reliable quantitative evaluation schemes through soft error faults at different algorithm levels, which can improve the reliability and robustness of the algorithm to the greatest extent.

Courses & TEACHING

Ph.D. Courses Taken:

Advanced Computer Architecture

Neural Network and Machine Learning
Image Processing and Machine Vision

Teaching Assistant:

Digital Integrated Circuits (Lead TA, Spring 2018)
Operating System (Lead TA, Autumn 2018)
Digital Integrated Circuits (Lead TA, Autumn 2020)