Yixiao **Ge**

Ph.D. Candidate in Computer Vision · Deep Learning

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Education

Multimedia Laboratory (MMLAB), The Chinese University of Hong Kong (CUHK) — *Hong Kong SAR*

Ph.D. Student in Computer Vision and Deep Learning — *Aug. 2018 - Present*

- Supervised by Prof. Hongsheng Li and Prof. Xiaogang Wang.
- Research interests include but not limit to unsupervised learning, disentangled learning, domain adaptation and image retrieval.

School of Automation, Huazhong University of Science and Technology (HUST) — *Wuhan, China*

B.S. in Measurement and Control Technology and Instrument — *Sep. 2013 - Jun. 2017*

- GPA: 3.81/4.00. Ranking: 2/48.
- Won National Scholarship and was awarded as Pacemaker to Merit Student.

Research & Publications

OpenUnReID: An Open-source Toolbox for Unsupervised or Domain Adaptive Object Re-ID — *OpenMMLab*

Yixiao Ge, Tong Xiao, Zhiwei Zhang, Hongsheng Li — *[code]*

- Act as the main developer of OpenUnReID codebase, which is one of the OpenMMLab projects.
- State-of-the-art performances on multiple benchmarks in both unsupervised object re-ID and domain adaptive object re-ID.

Self-paced Contrastive Learning with Hybrid Memory for Domain Adaptive Object Re-ID — *NeurIPS 2020*

Yixiao Ge, Dapeng Chen, Feng Zhu, Rui Zhao, Hongsheng Li — *[paper] [code]*

- We propose to encode all available information with a novel self-paced contrastive learning framework.
- Surpass state-of-the-art algorithms on unsupervised re-ID by considerable **16.2%** and **14.6%**.

Improved Mutual Mean-Teaching for Unsupervised Domain Adaptive Re-ID — *ECCVW 2020*

Yixiao Ge, Shijie Yu, Dapeng Chen — *[paper] [code]*

- We further improve the MMT framework by leveraging cross-domain data and domain-translation methods.
- Our method ranked **2nd place** in the Visual Domain Adaptation Challenge (VisDA-2020), which was held at the workshop of ECCV.

Self-supervising Fine-grained Region Similarities for Large-scale Image Localization — *ECCV 2020*

Yixiao Ge, Haibo Wang, Feng Zhu, Rui Zhao, Hongsheng Li — *[paper] [code]*

- We introduce to self-supervise image-to-region similarities by training in generations, significantly outperforming state-of-the-arts.
- Accepted as a **spotlight (top-5%)** presentation.

Structured Domain Adaptation with Online Relation Regularization for Unsupervised Person Re-ID — *In Submission*

Yixiao Ge, Feng Zhu, Rui Zhao, Hongsheng Li — *[paper] [code]*

- We propose a novel online relation-consistency regularization to generate more informative training samples.
- Fully explore the potential of domain translation-based methods, which have been ignored in recent years.

Mutual Mean-Teaching: Pseudo Label Refinery for Unsupervised Domain Adaptation on Person Re-ID — *ICLR 2020*

Yixiao Ge, Dapeng Chen, Hongsheng Li — *[paper] [code]*

- We propose a novel mutual mean-teaching framework to conduct online refinement of pseudo labels for domain adaptation.
- Considerable improvements of up to **18%** are achieved on four public benchmarks.

FD-GAN: Pose-guided Feature Distilling GAN for Robust Person Re-identification — *NeurIPS 2018*

Yixiao Ge*, Zhuowan Li*, Haiyu Zhao, Guojun Yin, Shuai Yi, Xiaogang Wang, Hongsheng Li — *[paper] [code]*

- We propose to learn identity-related and pose-unrelated person features with a GAN-based framework.
- Other than learning disentangled representations, FD-GAN can also generate person images with variant poses.

Honors & Awards

2018	**CUHK Postgraduate Scholarship,** during the whole Ph.D. period	*Hong Kong SAR*
2016	**First Prize of China Instrument and Control Society Scholarship,** top 6 students nationwide	*China*
2015	**Pacemaker to Merit Student,** top 20 students in HUST	*Wuhan, China*
2015	**National Scholarship,** top 1% students in Automation Department	*Wuhan, China*

Working Experience

Adobe Research *Remote*

Project Collaborator *Jul 2020 - Present*

- Collaborated with Dr. Ning Xu.

SenseTime Research *Shenzhen, China*

Research Intern *May 2019 - Jun 2020*

- Worked with Dr. Feng Zhu, Dr. Dapeng Chen and Dr. Rui Zhao.
- We worked on large-scale image localization, domain adaptation and unsupervised learning.

Multimedia Laboratory (MMLAB), The Chinese University of Hong Kong (CUHK) *Hong Kong SAR*

Research Assistant *Sep 2017 - Jul 2018*

- Advised by Prof. Hongsheng Li and Prof. Xiaogang Wang.
- We studied breast cancer detection, video object detection, and representation learning with generative models.

Teaching Experience

2020	**ENGG 2720, Complex Analysis**, Teaching Assistant	*CUHK*
2019	**ENGG 2420B, Complex Analysis and Differential Equations for Engineers**, Teaching Assistant	*CUHK*
2019	**ELEG 5491, Introduction to Deep Learning**, Teaching Assistant	*CUHK*
2018	**ENGG 2420A, Complex Analysis and Differential Equations for Engineers**, Teaching Assistant	*CUHK*

Professional Activities

Journal Reviewer of IJCV, IEEE TIP, IEEE TCSVT, IEEE TMM, Neurocomputing

Conference Reviewer of NeurIPS 2020, ICLR 2021