

Xialei Liu

PHD STUDENT · COMPUTER SCIENCE

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“Success is 99 percent hard work and 1 percent luck”

Summary

I am currently a research associate at Computer Vision Center. I completed my Ph.D. degree in Learning and Machine Perception (LAMP) group at Autonomous University of Barcelona (December, 2019). My main research interest is on the machine learning applied to computer vision, which includes self-supervised learning, metric learning and continual learning. I have applied these techniques to a wide range of fields, such as image quality assessment, crowd counting, continual classification and detection learning, generative adversarial networks, active learning and network distillation. I have published several work at top conferences and journal: 1 TPAMI, 1 ICCV, 2 CVPR, 1 NeurIPS and 1 ICPR. And I have three more submissions under review.

Publications

2019	Xialei Liu , et al., Continual Universal Object Detection	<i>Under Review</i>
2019	Xialei Liu , et al., Generative Feature Replay For Task-agnostic Continual Learning	<i>Under Review</i>
2020	Lu Yu, Bartłomiej Twardowski, Xialei Liu et al., Semantic Drift Compensation for Class-Incremental Learning of Embeddings	<i>CVPR</i>
2019	Xialei Liu , Joost van de Weijer, Andrew D. Bagdanov, Exploiting Unlabeled Data in CNNs by Self-supervised Learning to Rank	<i>TPAMI</i>
2019	Lu Yu, Vacit Oguz Yazici, Xialei Liu et al., Learning Metrics from Teachers: Compact Networks for Image Embedding	<i>CVPR</i>
2018	Xialei Liu , Joost van de Weijer, Andrew D. Bagdanov, Leveraging Unlabeled Data for Crowd Counting by Learning to Rank	<i>CVPR</i>
2018	Chengshen Wu, Luis Herranz, Xialei Liu et al., Memory Replay GANs: learning to generate images from new categories without forgetting	<i>NeurIPS</i>
2018	Xialei Liu , Marc Masana, Luis Herranz et al., Rotate your Networks: Better Weight Consolidation and Less Catastrophic Forgetting	<i>ICPR</i>
2017	Xialei Liu , Joost van de Weijer, Andrew D. Bagdanov, RankIQA: Learning from Rankings for No-reference Image Quality Assessment	<i>ICCV</i>

Education

Computer Vision Center, Universitat Autònoma de Barcelona

PHD IN COMPUTER SCIENCE AND ENGINEERING

Supervisors: Joost van de Weijer and Andrew D. Bagdanov

Barcelona, Spain

Sep. 2016 - Dec. 2019

Computer Vision Center, Universitat Autònoma de Barcelona

M.S. IN COMPUTER SCIENCE AND ENGINEERING

Barcelona, Spain

Sep. 2015 - Sep. 2016

Automation Department, Northwestern Polytechnic University

M.S. IN CONTROL THEORY AND ENGINEERING

Xi'an, China

Sep. 2013 - Mar. 2016

Automation Department, Northwestern Polytechnic University

B.S. IN INFORMATION THEORY AND ENGINEERING

Xi'an, China

Sep. 2009 - Mar. 2013

Work Experience

Computer Vision Center

RESEARCH ASSOCIATE

Barcelona, Spain

Jan 2020 - Now

Skills

Programming language: Matlab, Python, C/C++

Deep learning framework: Caffe, Tensorflow, Pytorch

Interest: Computer vision, Machine learning

Academic Services

Journal reviewer: TIP and TMM

Conference reviewer: ECCV'18, ACCV'18, WACV'19, CVPR'19, ICCV'19, BMVC'19 and CVPR'20

Honors & Awards

2015-2019 PhD scholarship, China Scholarship Council

Barcelona, Spain

2018 Travel Award, NeurIPS 2018

Montreal, Canada

2018 Third Prize, Baidu Star Development Contest

Beijing, China

2016 Volunteer, NeurIPS 2016

Barcelona, Spain

2013-2016 Master scholarship, Second level scholarship in NWPU

Xi'an, China

2009-2013 Bachelor scholarship, First level scholarship in NWPU

Xi'an, China

Presentation

Sep. 2018 Oral presentation, ICPR

Beijing, China

Sep. 2018 Invited Talk, Learning from Rankings workshop

Beijing, China

Aug. 2018 Invited Talk, Learning from Rankings Seminar

Xi'an, China

Mar. 2018 Demonstration, Real Time Crowd Counting System, Mobile World Congress

Barcelona, Spain

Feb. 2018 Invited Talk, Lifelong Learning Seminar

Barcelona, Spain

Project on Autonomous Driving

Active learning with car manufacturer

May 2018 - PRESENT

PROJECT MEMBER

Continuous transfer learning and distilling with car manufacturer

May 2017 - May 2018

PROJECT MEMBER

Lifelong Learning (Proof of Concept) with car manufacturer

Jan. 2017 - Jan. 2018

PROJECT MEMBER

Courses

Computer Vision: 3D Vision, Visual Recognition, Video Analysis, Optimization and Inference, Machine Learning, Image Processing

Mathematics: Linear Algebra, Statistics, Matrix Theory, Computational Method, Advanced Mathematics

Others: Control theory, Information theory, Navigation System, Digital Signal Processing, Embedded System and Applications

Language

CHINESE, ENGLISH AND SPANISH

