

Mengshi QI

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Education

Beihang University, Beijing, China (09/2014-06/2019)

Ph. D. in Computer Application Technology

Lab: Laboratory of intelligent recognition and image processing in School of CSE

Supervisor: Prof. Yunhong Wang

University of Rochester, Rochester, NY, USA (11/2017-12/2018)

Visiting Ph. D.

Lab: Visual Intelligence & Social Multimedia Analytic Research Group (VISTa)

Supervisor: Prof. Jiebo Luo

Beihang University, Beijing, China (09/2012-06/2014)

Master of Engineering in Computer Science

Lab: Sino-German Joint Software Institute in School of CSE

Supervisor: Prof. Zhongzhi Luan

Beijing University of Posts and Telecommunications, Beijing, China (09/2008-06/2012)

Bachelor of Engineering in Intelligence Science and Technology

Professional Experience

EPFL CVLab

Lausanne, Switzerland, Nov. 2019-present

Post-doc Researcher

Collaborators: Prof. Pascal Fua & Dr. Mathieu Salzmann

Baidu Research

Beijing, China, Aug. 2019-Nov. 2019

Visiting Researcher

Collaborator: Prof. Yi Yang

Beihang University

Beijing, China, Sep. 2014-Jun. 2019

Research Assistant

Supervisor: Prof. Yunhong Wang

Tencent Inc.

Beijing, China, Jun. 2014-Sep. 2014

Research Intern

International Game Technology (IGT)

Beijing, China, Oct. 2011-Apr. 2012

Software Development Intern

Research Interests

Computer Vision: scene understanding, visual reasoning, action/activity recognition
Multimedia: image/video retrieval, cross-modal hashing, sports video analysis
Machine Learning: generative models, zero/few-shot learning, self-supervised learning

Publications

Journal:

1. **Mengshi Qi**, Yunhong Wang, Annan Li, and Jiebo Luo, “*STC-GAN: Spatial-Temporally Coupled Generative Adversarial Networks for Predictive Scene Parsing*”, IEEE Transactions on Image Processing (TIP), 2020
2. **Mengshi Qi**, Yunhong Wang, Jie Qin, Annan Li, Jiebo Luo, and Luc Van Gool, “*stagNet: An Attentive Semantic RNN for Group Activity and Individual Action Recognition*”, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2019
3. **Mengshi Qi**, Yunhong Wang, Annan Li, and Jiebo Luo, “*Sports Video Captioning via Attentive Motion Representation and Group Relationship Modeling*”, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2019

Conference:

1. **Mengshi Qi**, Jie Qin, Yu Wu, and Yi Yang, “*Imitative Non-Autoregressive Modeling for Trajectory Forecasting and Imputation*”, IEEE Conference on Computer Vision and Pattern Recognition (CVPR’ 20), Seattle, USA, June 2020
2. **Mengshi Qi**, Jie Qin, Xiantong Zhen, Di Huang, Yi Yang and Jiebo Luo, “*Few-shot Ensemble Learning for Video Classification with SlowFast Memory Networks*”, ACM on Multimedia Conference (MM’ 20), Seattle, USA, October 2020
3. **Mengshi Qi**, Weijian Li, Zhengyuan Yang, Yunhong Wang, and Jiebo Luo, “*Attentive Relational Networks for Mapping Images to Scene Graphs*”, IEEE Conference on Computer Vision and Pattern Recognition (CVPR’ 19), Long Beach, USA, June 2019
4. **Mengshi Qi**, Yunhong Wang, Jie Qin, and Annan Li, “*KE-GAN: Knowledge Embedded Generative Adversarial Networks for Semi-Supervised Scene Parsing*”, IEEE Conference on Computer Vision and Pattern Recognition (CVPR’ 19), Long Beach, USA, June 2019
5. **Mengshi Qi**, Jie Qin, Annan Li, Yunhong Wang, Jiebo Luo, and Luc Van Gool, “*stagNet: An Attentive Semantic RNN for Group Activity Recognition*”, European Conference on Computer Vision (ECCV’ 18), Munich, Germany, September 2018
6. **Mengshi Qi**, Yunhong Wang, Annan Li, and Jiebo Luo, “*Sports Video Captioning by Attentive Motion Representation based Hierarchical Recurrent Neural Networks*”, The 1st International Workshop on Multimedia Content Analysis in Sports @ACM Multimedia (MMSports’ 18), Seoul, Korea, October 2018 (oral presentation)
7. **Mengshi Qi**, Yunhong Wang, and Annan Li, “*Online Cross-modal Scene Retrieval by Binary Representation and Semantic Graph*”, ACM on Multimedia Conference (MM’ 17), Mountainview, USA, October 2017
8. **Mengshi Qi**, Yunhong Wang, “*DEEP-CSSR: Scene Classification using Category-specific Salient Region with Deep Features*”, IEEE International Conference on Image Processing

(ICIP' 16), Phoenix, Arizona, USA, September 2016 (oral presentation)

Research Projects

- 1) Key Technology for Thorough Perception of Individual Visual Big Data, The Major Research Plan of the Natural Science Foundation of China (Grant No.2016YFB1001002) (01/2016-06/2019)
Supervisor: Prof. Yunhong Wang
- 2) Small-Scale Group Activity Analysis in Sports Videos, The Natural Science Foundation of China (Grant No.61573045) (01/2016-06/2019)
Supervisor: Prof. Yunhong Wang
- 3) Multi-level Human-Being Centered Visual Understanding, The Hong Kong, Macao, and Taiwan Science and Technology Cooperation Program of China (Grant No.L2015TGA9004) (09/2015-09/2017)
Supervisor: Prof. Yunhong Wang
- 4) Face Aging Simulation and Estimation Research based on Massive Internet Media Data, The Natural Science Foundation of China (Grant No.F030403) (09/2014-09/2016)
Supervisor: Prof. Yunhong Wang & Dr. Di Huang
- 5) Hierarchical Computation Theory and Model of Media Cognition, The National Basic Research Program (Grant No.2010CB327902) ("973 program") (01/2010-01/2014)
Supervisor: Prof. Yunhong Wang
- 6) Research and Implementation of Distributed Anomaly Detection System for Data Center (cooperation with Tencent Inc.), The National High-tech Research & Development Program ("863 program") (08/2013-08/2014)
Supervisor: Prof. Depei Qian & Prof. Zhongzhi Luan
- 7) Research and Implementation of Graduate Employment Information Public Service Platform, The National Key Technology Research & Development Program (06/2012-06/2013)
Supervisor: Prof. Depei Qian & Prof. Zhongzhi Luan
- 8) Development and Optimization of Chinese Search Engine (cooperation with Sogou.com), Undergraduate Graduation Project (06/2007-06/2008)
Supervisor: Prof. Xiaojie Wang

Technology Competence

- Programming Skills: C & C++, Java, Shell, Python, and MATLAB
- Programming Environment & Tools: Vim, Eclipse, Visual Studio, and Sublime Text
- Operating Systems: Linux, Windows
- Open Sources: Pytorch, TensorFlow, OpenCV, Hadoop, and Storm

Honors & Awards

Academic Scholarships

National Scholarship for Graduate Students, Beihang University (2017)

Grant Scholarship of China Scholarship Council, CSC (2017-2018)

Two times recipient of First Prize Scholarship (Top 10%), Beihang University (2012-2014)

Two times recipient of First Prize Scholarship (Top 10%), Beijing University of Posts and Telecommunications (2010-2012)

Academic Awards

Outstanding Graduate Award of Beijing, Beihang University (2019)

Technological Innovation Award in School of Computer, Beijing University of Posts and Telecommunications (2010-2011)

Twice recipient of Outstanding Student Award, Beijing University of Posts and Telecommunications (2010-2012)

Professional Service

Conference Reviewer: ICLR 2021/CVPR 2020/ECCV 2020/NeurIPS 2020/ICCV 2019/MM 2019

Journal Reviewer: IEEE Transactions on Image Processing (TIP)/IEEE Transactions on Circuits Systems for Video Technology (TCSVT)/Pattern Recognition (PR)/ACM Computing Surveys

PC Member: AAAI 2020

IEEE Member and ACM Member