

Yang Wang

Contact **Email:** wang33@cs.stonybrook.edu **Mobile:** (+1) 631-997-8096
Web: <http://www.yangwangx.com>

Highlights 5+ years of experience on computer vision research and application, focusing on video understanding

- Video understanding: highlight detection, action & context separation, temporal modeling, graph modeling. Published in CVPR, FG.
- Human hand detection: context modeling. Published in ICCV.
- Image/video enhancement: GIF color dequantization, video interpolation, real noise denoising. Published in CVPR, AAAI.
- Internship experience at Megvii Research USA and Facebook AI Research.

Education **Stony Brook University (SBU)** **9/2014 - (Expected) 5/2020**
Ph.D. in Computer Vision

- Adviser: Prof. Minh Hoai Nguyen

University of Science and Technology of China (USTC) **9/2009-7/2013**
B.E. in Electronic Engineering

Experience **Internship @ Facebook AI Research (Cambridge, MA)** **6/2019-9/2019**

- Host: Prof. Lorenzo Torresani, Gedas Bertasius
- Topic: Supervoxel Attention Graphs for Long-Range Video Modeling

Internship @ Megvii Research (Redmond, WA) **5/2018-8/2018**

- Host: Haibin Huang (Research Scientist), Jue Wang (Director)
- Topic: Color Dequantization and Temporal Interpolation of GIF images
 - proposed GIF2Video, the first learning-based method for enhancing the visual quality of GIFs in the wild; introduced two large datasets, namely GIF-Faces and GIF-Moments, for both training and evaluation.

Research Assistant @ Computer Vision Lab, SBU **12/2014-Present**

- Advisor: Prof. Minh Hoai Nguyen
- Topic: Video Understanding and Human Action Recognition
 - detect highlight action segments in videos
 - separate human action from context using conjugate samples
 - eigen evolution pooling for temporal feature aggregation
- Topic: Object Detection, Unsupervised Learning, Visualization, etc.
 - human hand detection and orientation estimation in the wild
 - visualize the learning process of deep neural networks
 - unsupervised learning of flow estimation network by watching videos

Research @ Information Processing Center, USTC **9/2012-6/2013**

- Advisor: Prof. Houqiang Li
- Topic: Video Super Resolution (B.E. Dissertation)

- modeled imaging process (optical flow, blur kernel, down-sampling, noise) as a Bayesian network; derived formulation from MAP principle; solved optimization using IRLS and Conjugate Gradient approach.

National University Innovation Program, China **8/2012-3/2013**

- Advisor: Prof. Ao Li
- Topic: miRNA Target Prediction using Data-Driven Approach
 - mRNA-miRNA dataset collection by parsing mirTarbase webpage and Microarray data; feature selection from gene sequence and functional information using mRMR; significant improvement on miRNA target prediction.

USTC-MSRA Smart Campus Program **2/2012-6/2012**

- Topic: USTC Social Network
 - built a social network using UCHome; redesigned interface and functionality, enabling students to share posts, search books, follow classes, etc.

USTC Robot Contest, Team Leader, Enter the Final **6/2011-9/2011**

- Topic: Human-assisting Robot
 - built a prototype robot that assists blind people to walk at home and on street; our robot relies on assorted sensors (ultrasonic/infrared/color sensors) and can be controlled with voice commands (Lingyang-SPCE061A).

Honor & Award	CS Department Chair Fellowship, SBU	9/2014
	Research Fellowship, National University Student Innovation Program	4/2013
	Meritorious Winner, MCM (Mathematical Contest in Modeling)	3/2013
	GDC-Tech Outstanding Student Scholarship, USTC	10/2012
	Robot Game Contest, Enter the Final, Team Leader, USTC	10/2011
	Outstanding Student Scholarship, USTC	9/2010
	Physics Olympiad Second Prize, Shandong Province	3/2009

Skill Programming Languages: Python, C/C++/Java
Libraries: PyTorch, Tensorflow, OpenCV

Academic Service **Conference Reviewer**

- CVPR 2018, 2019, 2020; ICCV 2019; ECCV 2018; AAAI 2020;
- ICCVW-RLQ 2019; CVPRW-MBCCV 2019; ICVGIP 2016, 2018;

Student Mentorship, CS, SBU

- Justin Zhang. Regional finalist of Siemens science competition. 2017
- Abhinand Sivaprasad. Regional finalist of Siemens science competition. 2015
- Selina Wang. Research on action boundary detection. 2015

Teaching Assistant, CS, SBU

- CSE-114/130: Introduction to Programming in Java/C
- CSE-214: Data Structures & Algorithms in Java
- CSE-512: Machine Learning

Publication

- (P1) Yuqian Zhou, Jianbo Jiao, Haibin Huang, **Yang Wang**, Jue Wang, Honghui Shi, Thomas Huang. “When AWGN-based Denoiser Meets Blind Real Noise”, *AAAI Conference on Artificial Intelligence (AAAI 2020)*.
- (P2) Supreeth Narasimhaswamy, Zhengwei Wei, **Yang Wang**, Justin Zhang, Minh Hoai. “Contextual Attention for Hand Detection in the Wild”, *International Conference on Computer Vision (ICCV 2019)*.
- (P3) **Yang Wang**, Haibin Huang, Chuan Wang, Tong He, Jue Wang, Minh Hoai. “GIF2Video: Color Dequantization and Temporal Interpolation of GIF images”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2019)*.
- (P4) **Yang Wang**, Minh Hoai. “Pulling Actions out of Context: Explicit Separation for Effective Combination”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018)*.
- (P5) **Yang Wang**, Vinh Tran, Minh Hoai. “Eigen-Evolution Dense Trajectory Descriptors”, *IEEE International Conference on Automatic Face and Gesture Recognition (FG 2018)*.
- (P6) Wen Zhong, Cong Xie, Yuan Zhong, **Yang Wang**, Wei Xu, Shenghui Cheng, Klaus Mueller. “Evolutionary Visual Analysis of Deep Neural Networks”, *International Conference on Machine Learning (ICML-W 2017) Workshop on Visualization for Deep Learning*.
- (P7) **Yang Wang**, Minh Hoai. “Improving Human Action Recognition by Non-action Classification”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2016)*.
- (P8) Ning Wang, **Yang Wang**, Yaodong Yang, Yi Shen, Ao Li. “miRNA Target Prediction Based on Gene Ontology”, *International Symposium on Computational Intelligence and Design (ISCID 2013)*.

Preprint

- (Q1) **Yang Wang**, Gedas Bertasius, Tae-Hyun Oh, Abhinav Gupta, Minh Hoai, Lorenzo Torresani. “Supervoxel Attention Graphs for Long-Range Video Modeling”, in *anonymous submission*.
- (Q2) **Yang Wang**, Vinh Tran, Gedas Bertasius, Lorenzo Torresani, Minh Hoai. “Attentive Action and Context Factorization”, in *anonymous submission*.
- (Q3) Vinh Tran, **Yang Wang**, Minh Hoai. “Back to the Future: Knowledge Distillation for Human Action Anticipation”, in *anonymous submission*.
- (Q4) **Yang Wang**, Vinh Tran, Minh Hoai. “Eigen Evolution Pooling for Human Action Recognition”, in *anonymous submission*.