

Yang Wang

Contact	Email: yangwangx@waymo.com Web: http://www.yangwangx.com	Mobile: (+1) 631-997-8096
Highlights	5+ years of experience on computer vision research and application, focusing on video understanding <ul style="list-style-type: none">• 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) Ph.D. in Computer Vision <ul style="list-style-type: none">• Adviser: Prof. Minh Hoai Nguyen	9/2014-5/2020
	University of Science and Technology of China (USTC) B.E. in Electronic Engineering	9/2009-7/2013
Experience	Perception Software Engineer @ Waymo <ul style="list-style-type: none">• Topic: Make cars see and understand.	6/2020-Present
	Research Internship @ Kwai Y-Lab (Palo Alto) <ul style="list-style-type: none">• Host: Haibin Huang• Topic: Reinforcement Learning for Stroke-based Painting	12/2019-1/2020
	Research Internship @ Facebook AI Research <ul style="list-style-type: none">• Host: Prof. Lorenzo Torresani, Gedas Bertasius• Topic: Supervoxel Attention Graphs for Long-Range Video Modeling	6/2019-9/2019
	Research Internship @ Megvii Research (Redmond) <ul style="list-style-type: none">• Host: Jue Wang (Director), Haibin Huang (Research Scientist)• Topic: Color Dequantization and Temporal Interpolation of GIF images<ul style="list-style-type: none">– 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.	5/2018-8/2018
	Research Assistant @ Computer Vision Lab, SBU <ul style="list-style-type: none">• Advisor: Prof. Minh Hoai Nguyen• Topic: Video Understanding and Human Action Recognition<ul style="list-style-type: none">– 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.<ul style="list-style-type: none">– human hand detection and orientation estimation in the wild	12/2014-5/2020

- 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, 2020; AAAI 2020;
- BMVC 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*.