

Hao ZHOU, Ph.D

CONTACT INFORMATION

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WORKING EXPERIENCE

Google Research **Aug. 2022 - present**
Senior Software Engineer, Google Research, research on computer vision algorithms and their applications.

Amazon Web Services, AI Lab **Sep. 2019 - Jul. 2022**
Applied Scientist, AWS Rekognition, focus on research and developing machine learning and computer vision algorithms for AWS image and video analytical services.

EDUCATION

The University of Maryland - College Park (UMD) **Sep. 2013 - Aug. 2019**

- Ph.D. Dept. of Computer Science
- Adviser: Prof. David W. Jacobs
- Area of Study: Computer Vision

The University of Hong Kong (HKU) **Sep. 2010 - Nov. 2012**

- M.Phil. Dept. of Computer Science
- Adviser: Dr. Kwan-Yee K. Wong
- Area of Study: Computer Vision

The University of Science and Technology of China (USTC) **Sep. 2006 - Jun. 2010**

- B.Eng Dept. of Electronic Engineering and Information Science

PREVIOUS RESEARCH EXPERIENCE

Intern at Adobe Research **May - Aug. 2018**

- Mentor: Sunil Hadap
- Topic: Deep portrait relighting.

Intern at Media Analytics group NEC Labs America **May - Aug. 2017**

- Mentor: Quoc-Huy Tran and Manmohan Chandraker
- Topic: Learning affordance correspondence through human object interaction.

Intern at National ICT (NICTA) Australia **Jul. - Oct. 2015**

- Mentor: Jose M. Alvarez and Fatih Porikli
- Topic: Compressing deep neural networks.

Research Assistant at The University of Hong Kong **Nov. 2012 - Jul. 2013**

- Adviser: Dr. Kwan-Yee K. Wong
- Topic: Face sketch synthesis.

REFEREE

Journal: IEEE Transactions on Signal Processing. IEEE Transactions on Image Processing.
Conference: ICCV, CVPR, ECCV, AAAI, WACV, ACCV

PUBLICATIONS IN COMPUTER VISION

1. Rahul Duggal, **Hao Zhou**, Shuo Yang, Jun Fang, Yuanjun Xiong, Wei Xia. Towards Regression-Free Neural Networks for Diverse Compute Platforms. To appear in *European Conference on Computer Vision (ECCV)*, 2022.
2. Tianyue Cao, Yongxin Wang, Yifan Xing, Tianjun Xiao, Tong He, Zheng Zhang, **Hao Zhou**, Joe Tighe. PSS: Progressive Sample Selection for Open-World Visual Representation Learning. To appear in *European Conference on Computer Vision (ECCV)*, 2022.
3. Rahul Duggal, **Hao Zhou**, Shuo Yang, Yuanjun Xiong, Wei Xia, Zhuowen Tu, Stefano Soatto. Compatibility-aware Heterogeneous Visual Search. *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.

4. Koutilya PNV, **Hao Zhou**, David Jacobs. SharinGAN: Combining Synthetic and Real Data for Unsupervised Geometry Estimation. *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
5. **Hao Zhou**, Sunil Hadap, Kalyan Sunkavalli, David W Jacobs. Deep Single-Image Portrait Relighting. *IEEE International Conference on Computer Vision (ICCV)*, 2019.
6. **Hao Zhou**, Yu, Xiang, David W Jacobs. GLoSH: Global-Local Spherical Harmonics for Intrinsic Image Decomposition. *IEEE International Conference on Computer Vision (ICCV)*, 2019. (Oral)
7. **Hao Zhou***, Jin Sun*, Yaser Yacoob, David W Jacobs. Label Denoising Adversarial Network (LDAN) for Inverse Lighting of Face Images. *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR⁰)*, 2018. (spotlight, * means equal contribution)
8. Hui Ding, **Hao Zhou**, Shaohua Kevin Zhou, Rama Chellappa. A Deep Cascade Network for Unaligned Face Attribute Classification. *Association for the Advancement of Artificial Intelligence (AAAI)*, 2018. (spotlight)
9. Soumyadip Sengupta, **Hao Zhou**, Walter Forkel, Ronen Basri, Tom Goldstein, David W Jacobs. Solving Uncalibrated Photometric Stereo Using Fewer Images by Jointly Optimizing Low-rank Matrix Completion and Integrability. *Journal of Mathematical Imaging and Vision (JMIV)*, 2018.
10. **Hao Zhou**, Jose M. Alvarez, Fatih Porikli. Less is More: Towards Compact CNNs. *European Conference on Computer Vision (ECCV)*, 2016. (Spotlight)
11. **Hao Zhou**, Torsten Sattler, David W. Jacobs. Evaluating Local Features for Day-Night Matching. *European Conference on Computer Vision (ECCV)*, 2016. (workshop)
12. **Hao Zhou**, Zhanghui Kuang, Kwan-Yee K. Wong. Markov Weight Fields for Face Sketch Synthesis. *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
13. Zhanghui Kuang, Dirk Schnieders, **Hao Zhou**, Kwan-Yee K. Wong, Yizhou Yu, Bo Peng. Learning Image-Specific Parameters for Interactive Segmentation. *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.

PUBLICATIONS IN
OTHER FIELD

1. Hong Wei, **Hao Zhou**, Jagan Sankaranarayanan, Sudipta Sengupta, Hanan Samet. Delle: Detecting latest local events from geotagged tweets. *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on Analytics for Local Events and News*, 2019.
2. Hong Wei, **Hao Zhou**, Jagan Sankaranarayanan, Sudipta Sengupta, Hanan Samet. Detecting latest local events from geotagged tweet streams. *Proceedings of the 26th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems*, 2018.
3. Hong Wei, **Hao Zhou**, Jagan Sankaranarayanan, Sudipta Sengupta, Hanan Samet. Residual convolutional LSTM for tweet count prediction. *Companion Proceedings of the The Web Conference*, 2018.

TEACHING

Teaching Assistant, Dept. of Computer Science, UMD

- CMSC733 Computer Processing of Pictorial Information (Prof. David W. Jacobs) Fall 2014
- CMSC426 Image Processing (Prof. David W. Jacobs) Spring 2014
- CMSC131 Object-Oriented Programming I (Dr. Fawzi Emad and Dr. Evan Golub). Fall 2013

Teaching Assistant, Dept. of Computer Science, HKU

- CSIS0259 Principles of Programming Languages (Dr. C.F. Chong). Fall 2011
- CSIS0234A Computer and Communication Networks (Dr. T.C. Tam). Spring 2011

HONORS &
AWARDS

Dean's Fellowship, Dept. of CS, UMD	2013, 2014
Guanghua Scholarship	2009
Weining Gong Scholarship	2008
Outstanding Student Scholarship of USTC, Grade 1	2007