

EDUCATION

UNC at Chapel Hill

University of North Carolina
Ph.D., Computer Science
3D Computer Vision Group
2016-Present | Chapel Hill, NC

Shanghai Jiao Tong University

B.S.E., Computer Science and
Technology

2012-2016 | Shanghai, China

ACM Honored Class (a pilot computer
science class in China)

Zhiyuan College

RESEARCH INTERESTS

Computer Vision
Machine Learning
Artificial Intelligence

LINKS

Github:// [zhenni](#)
LinkedIn:// [zhenwei528](#)
Google Scholar:// [Zhen Wei](#)

COURSEWORK

Graduate

Computer Vision in our 3D World
Physically Based Modeling & Simulation
Optimal Estimation Image Analysis
Mobile Computing Systems
Parallel Computing
Cryptography
Robotics
Computational Photography

Undergraduate

Machine Learning
Compiler Design and Implementation
Operating System
Database System

SKILLS

Deep Learning Framework

Caffe • PyTorch • Tensorflow

Programming Languages

Over 10000 lines:

C++ • Python • Java

Over 5000 lines:

Matlab • Android • Bash

Over 1000 lines:

html • JSP • Javascript

SELECTED RESEARCH & WORK EXPERIENCE

University of North Carolina | 3D Vision Lab | Research Assistant

Advisor: Prof. Jan-Michael Frahm, UNC-CH

Chapel Hill, NC | 9.2016-Present

- Proposed 3D human pose estimation algorithm for top-down egocentric dataset
- Egocentric 3D human pose data capturing (incl. glasses design & camera system)
- Developed 3D reconstruction with semantic segmentation on drone images dataset
- Designed dynamic visual sequence prediction using motion flow networks

Facebook Research | Mobile Vision Team | Research Intern

Manager: Dr. Péter Vajda, Research Scientist Manager Menlo Park, CA | 5.2019-8.2019

Mentor: Dr. Peizhao Zhang, Research Scientist

Part-time Intern | 8.2019-Present

- Proposed new egocentric video 3D human pose estimation algorithm.

Amazon Robotics | CV/ML Group | Applied Scientist Intern

Manager: Dr. Mohan Mahadevan, Head of CV/ML Group Seattle, WA | 5.2018-8.2018

- Developed CNN understanding platform for applications in PyTorch & Tensorflow.
- Proposed a new CNN understanding and visualization algorithm

SAIC Innovation Center | Autonomous Driving Group | Summer Intern

Mentor: Dr. Jerry Yu, Deputy Director, SAIC

San Jose, CA | 5.2017-8.2017

- Developed 3D object detection algorithm for autonomous driving (Image & Lidar)

Microsoft Research Asia | Visual Computing Group | Research Intern

Mentor: Dr. Jingdong Wang, Senior Principal Research Manager, MSRA 8.2015-2.2016

- Contributed to design a new architecture for deep networks (Deeply-Fused Nets)
- Developed DisturbLabel method and other applications on ImageNet using Caffe
- Built a joint-training network for graphical model and neural networks

Shanghai Jiao Tong University | BCMI Lab | Research Assistant

Advisor: Prof. Hongtao Lu, BCMI Lab, SJTU

Shanghai, China | 7.2014-6.2016

- Researched large-scale image retrieval using hashing (traditional & deep learning)

PUBLICATIONS

- Young-Woon Cha, True Price, **Zhen Wei**, Xinran Lu, *et al.* "Towards Fully Mobile 3D Face, Body, and Environment Capture Using Only Head-worn Cameras" IEEE Transactions on Visualization and Computer Graphics (TVCG), 2018
- Price, True, Johannes L. Schönberger, **Zhen Wei**, Marc Pollefeys, and Jan-Michael Frahm. "Augmenting Crowd-Sourced 3D Reconstructions using Semantic Detections" IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018
- Dinghuang Ji, **Zhen Wei**, Enrique Dunn, Jan-Michael Frahm. "Dynamic Visual Sequence Prediction with Motion Flow Networks" IEEE Winter Conf. on Applications of Computer Vision (WACV), 2018.
- Jingdong Wang, **Zhen Wei**, Ting Zhang, Wenjun Zeng. "Deeply-Fused Nets" arXiv preprint arXiv:1605.07716 <https://arxiv.org/abs/1605.07716>
- Lingxi Xie, Jingdong Wang, **Zhen Wei**, Meng Wang, Qi Tian. "DisturbLabel: Regularizing CNN on the Loss Layer" IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016.
- Li Wu, Kang Zhao, Hongtao Lu, **Zhen Wei**, Baoliang Lu. "Distance Preserving Marginal Hashing for Image Retrieval". IEEE International Conference on Multimedia and Expo (ICME), 2015.

SELECTED GRADS COURSE PROJECTS

Some code available at: <https://github.com/zhenni> and <http://cs.unc.edu/~zhenni/courses>

Robotics Object-oriented Dense 3D Semantic Mapping with CNN *semantic visual SLAM*, C++

Mobile APP Dance Dance Convolution *Android dance game with human pose detection*, JAVA

SELECTED AWARDS

5.2016 China Collegiate Programming Contest Women Final 2016 Rank 2

2012 National Mathematical Olympiad in Province, Henan, China First Prize