

## Zhe Wang

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CONTACT INFORMATION	4th year PhD Student Department of Computer Science The University of Arizona	<i>Cell:</i> +1-(520)3699297 <i>E-mail:</i> zhew@email.arizona.edu <i>Web:</i> www.z-wang.com
RESEARCH INTERESTS	Interactive Data Analysis, Data Visualization, Machine Learning	
EDUCATION	<b>The University of Arizona</b> Tucson, AZ, USA Aug. 2014 to present PhD Student, Department of Computer Science <ul style="list-style-type: none"><li>• Advisor: Dr. Carlos Scheidegger</li><li>• Committee: Dr. Richard T. Snodgrass, Dr. Joshua A. Levine, Dr. Remco Chang</li></ul> <b>Chinese Academy of Sciences</b> Beijing, China Sep. 2011 to June 2014 M.S., Institute of Computing Technology (ICT) <ul style="list-style-type: none"><li>• Advisor: Dr. Hong Liu</li></ul> <b>Northeast Normal University</b> Changchun, China Sep. 2007 to June 2011 B.E., College of Software Engineering <ul style="list-style-type: none"><li>• Major: Software Engineering</li></ul>	
RESEARCH PROJECTS	<b>NNCubes</b> (Nov. 2017 to present) <ul style="list-style-type: none"><li>• Training neural networks to predict aggregational values for data visualization.</li></ul> <b>TopoCubes</b> (Jan. 2017 to present) <ul style="list-style-type: none"><li>• Interactive exploration of persistent homology of large datasets.</li></ul> <b>Gaussian Cubes</b> (Sep. 2015 to Dec. 2016) <ul style="list-style-type: none"><li>• Real-Time Modeling for Visual Exploration of Large Multidimensional Datasets.</li></ul> <b>Light Curve Visualization</b> (May 2015 to Dec. 2015) <ul style="list-style-type: none"><li>• Interactive visualization of astronomy light curve data.</li></ul> <b>ANTARES</b> (Aug. 2014 to Aug. 2016) <ul style="list-style-type: none"><li>• The Arizona-NOAO Temporal Analysis and Response to Events System</li><li>• Architecture Team Member (Aug. 2014 to Sep. 2016)</li><li>• Visualization Team Member (Aug. 2015 to present)</li><li>• Chief Programmer (Aug. 2015 to Sep. 2016)</li></ul> <b>Obstacle Avoidance System for the Blind</b> (June 2012 to May 2014) <ul style="list-style-type: none"><li>• M.S. Thesis Project</li><li>• An electronic travel aid to help the visually impaired walk safely using RGB-D sensors</li></ul> <b>Crowd Density Estimation</b> (Sep. 2011 to June 2012) <ul style="list-style-type: none"><li>• Proposed a novel feature for crowd density estimation: the Local Binary Pattern Co-Occurrence Matrix</li></ul>	
PUBLICATIONS	[1] <b>Zhe Wang</b> , Nivan Ferreira, Youhao Wei, Aarth Bhaskar, Carlos Scheidegger. Gaussian Cubes: Real-Time Modeling for Visual Exploration of Large Multidimensional Datasets. <i>IEEE InfoVis 2016, IEEE TVCG</i> .	

- [2] Abhijit Saha, **Zhe Wang**, Thomas Matheson, et al. "ANTARES: Progress towards building a Broker of time-domain alerts". In: *Proc. SPIE 9910, Observatory Operations: Strategies, Processes, and Systems VI, 99100F* (July 18, 2016)
- [3] **Zhe Wang**, Hong Liu, Xiangdong Wang, and Yueliang Qian. Segment and Label Indoor Scene based on RGB-D for the Visually Impaired. In: *International Conference on Multimedia Modeling(MMM)*, 2014.
- [4] Hong Liu, **Zhe Wang**, Xiangdong Wang, Guoying Zhao, and Yueliang Qian. Adaptive Scene Segmentation and Obstacle Detection for the Blind. *Journal of Computer-Aided Design and Computer Graphics(JCAD)*, 25(12), 1818-1825, 2013.
- [5] **Zhe Wang**, Hong Liu, Yueliang Qian, and Tao Xu. Real-Time Plane Segmentation and Obstacle Detection of 3D Point Clouds for Indoor Scenes. In: *The 2nd Workshop on Consumer Depth Cameras for Computer Vision, in conjunction with European Conference on Computer Vision (ECCV)*, 2012.
- [6] **Zhe Wang**, Hong Liu, Yueliang Qian, and Tao Xu. Crowd Density Estimation Based On Local Binary Pattern Co-Occurrence Matrix. In: *the 2nd IEEE International Workshop on Advances in Automated Multimedia Surveillance for Public Safety, in conjunction with IEEE International Conference on Multimedia and Expo (ICME)*, 2012.
- [7] Tao Xu, Hong Liu, Yueliang Qian and **Zhe Wang**. A Fast and Roust Pedestrian Detection Framework based on Static and Dynamic Information. In: *IEEE International Conference on Multimedia and Expo (ICME)*. 2012.

WORK  
EXPERIENCE

**AT&T Labs**  
NYC, USA

- Research Intern May 2017 to July 2017

AWARDS

- Graduate College Fellowship, University of Arizona (2017)
- Dongshi Medal, NENU (**top 38** students of the university) (2011)
- National Second Prize in Microsoft Imagine Cup Software Design (**top 3** projects in China) (2010)
- National Second Prize in Microsoft Imagine Cup Multipoint Education Award (**top 2** projects in China) (2009)
- Presidential Scholarship, NENU (**top 1%** students) (2008, 2009, 2010, 2011)

SKILLS

**Programming Language:** Python, C/C++, Javascript, SQL,  
**Library and Tools:** D3, React.js, Numpy, Scipy, OpenCV, PCL, Matplotlib