

Andy Zeng
andyzeng.com

35 Olden Street
Princeton NJ, 08544

andyz@princeton.edu
(909) 354 7236

- EDUCATION** **Princeton University, NJ** *September 2015 - Present*
Ph.D in Computer Science
Advisor: Prof. Thomas Funkhouser
- University of California, Berkeley, CA** *August 2011 - May 2015*
B.A. Computer Science
B.A. Applied Mathematics
Computer Science GPA: 3.75/4.0
- PORTFOLIO** <http://www.andyzeng.com>
Extensive listing of co-curricular and research projects.
- DISTINCTIONS** 3rd (Stow) and 4th (Pick) Place at the Worldwide Amazon Picking Challenge *2016*
An internationally recognized premier robotics competition.
- Princeton University Ph.D. Fellowship *2016 - Present*
- Gordon Y.S. Wu Fellowship in Engineering and Wu Prize *2015 - 2016*
"A highly selective and prestigious award" from Princeton University.
- Upsilon Pi Epsilon (Computer Science Honors Society) *2013 - 2015*
Selective admission to only the top Computer Science students at UC Berkeley.
- FBLA 1st Place State Champion for Computer Programming, California *2011*
- PUBLICATIONS** **Andy Zeng**, Shuran Song, Matthias Nießner, Matthew Fisher, Jianxiong Xiao, Thomas Funkhouser.
3DMatch: Learning Local Geometric Descriptors from RGB-D Reconstructions. *arXiv:1603.08182*
Accepted at IEEE Conference on Computer Vision and Pattern Recognition (CVPR). 2017.
- Shuran Song, Fisher Yu, **Andy Zeng**, Angel X. Chang, Manolis Savva, Thomas Funkhouser.
Semantic Scene Completion from a Single Depth Image. *arXiv:1611.08974* *Accepted at the IEEE*
Conference on Computer Vision and Pattern Recognition (CVPR). 2017.
- Andy Zeng**, Kuan-Ting Yu, Shuran Song, Daniel Suo, Ed Walker Jr., Alberto Rodriguez,
Jianxiong Xiao. Multi-view Self-supervised Deep Learning for 6D Pose Estimation in the Ama-
zon Picking Challenge. *arXiv:1609.09475* *Accepted at the IEEE International Conference on*
Robotics and Automation (ICRA). 2017.
- Andy Zeng**, Vishnu Naresh Boddeti, Kris M. Kitani, Takeo Kanade. Face Alignment Re-
finement. *IEEE Winter Conference on Applications of Computer Vision (WACV). 2015.*
- Andy Zeng**, Vishnu Naresh Boddeti, Kris M. Kitani, Takeo Kanade. Face Alignment Re-
finement. *Robotics Institute Summer Scholars (RISS) Working Papers Journal, 2:83-91. 2014.*
- RESEARCH** Leader for Princeton Division of Team MIT-Princeton at the Amazon Picking Challenge 2016
EXPERIENCE *Princeton Vision & Robotics Group, MIT MCube Lab* *2015 - 2016*
Advisors: Prof. Jianxiong Xiao, Prof. Alberto Rodriguez
Objectives: develop a robust robot vision system with 6D object pose estimation that leverages
multi-view RGB-D data and self-supervised deep learning.
- Primary author of 3DMatch, in collaboration with the Stanford Computer Graphics Lab
Princeton Vision & Robotics Group, Stanford Computer Graphics Lab *2015 - 2016*

Advisors: Prof. Jianxiong Xiao, Prof. Thomas Funkhouser
Objectives: develop a data-driven local geometric descriptor for matching 3D data with unsupervised deep learning over existing RGB-D reconstructions.

Robotics Institute Summer Scholar (RISS) at the Carnegie Mellon Computer Vision Group
Robotics Institute - Carnegie Mellon University 2014

Advisors: Vishnu Naresh Boddeti, Kris M. Kitani, Prof. Takeo Kanade
Objectives: develop a post-processing method for face alignment to achieve sub-pixel facial contour accuracy.

Research Assistant at the Berkeley Tele-Immersion Lab
CITRIS at the University of California, Berkeley 2014 - 2015

Advisors: Victor Shia, Robert P. Mathew, Prof. Ruzena Bajcsy
Objectives: develop computer vision and machine learning supplements for concurrent human mechatronics research for bionic exoskeletons: (1) millimeter-accurate 3D surface reconstruction (2) data-driven method to decode torque information from human limb motion and corresponding EMG signal data.

Research Assistant at the Berkeley Tele-Immersion Lab
CITRIS at the University of California, Berkeley 2013

Advisors: Victor Shia, Katherine D. Campbell, Prof. Ruzena Bajcsy
Objectives: develop computer vision algorithms for a new type of car-safety system which utilizes a driver model to predict future driver steering and braking: (1) human pose estimation and feature tracking (2) stereo reconstruction and camera calibration software.

Research Assistant at the Bay Area Intellectual Property Group
University of California Berkeley, Bay Area Intellectual Property Group 2013

Advisors: Julian Zhang, Wenbo Wang, Ariel Bentolila
Objectives: develop technical designs to support a robot humanoid hand: (1) path/grasp planning of an anthropomorphic 5 finger robot hand/arm in grabbing objects (2) microcontroller coordination of vision, other sensory inputs, and actuators towards achieving object acquisition and stable object grasping.

LEADERSHIP

Team MIT-Princeton at the Amazon Picking Challenge 2016
Team Leader of the Princeton Division 2016

The Berkeley Forum (<https://forum.berkeley.edu/>)
Founding Webmaster and Site Production Lead 2012 - 2014

Upsilon Pi Epsilon (Computer Science Honor Society)
President 2015

Treasurer 2014

IT Chair and Webmaster 2014

Member 2013

SERVICES

Organizer, CVPR Tutorial: 3D Deep Learning with Marvin 2016

Technical Paper Reviewer 2015 - 2017

Conference on Computer Vision and Pattern Recognition (CVPR)

European Conference on Computer Vision (ECCV)

Special Interest Group on Computer GRAPHics and Interactive Techniques (SIGGRAPH)

International Conference on Pattern Recognition (ICPR)

iOS Mobile Application Developer 2014

ASUC Office of the President

Member, Computer Science Undergraduate Association at UC Berkeley 2012 - 2015

TEACHING	Princeton University, COS 426 - Computer Graphics <i>Teaching Assistant</i>	<i>Spring 2017</i>
	Princeton University, COS 429 - Computer Vision <i>Teaching Assistant</i>	<i>Fall 2016</i>
	UC Berkeley, CS61a Structure and Interpretation of Computer Programs <i>Lab Assistant</i>	<i>Fall 2012</i>
WORK EXPERIENCE	Lenovo Corporate Research and Development Centre <i>Summer Intern, Server Systems Management</i>	<i>2010</i>
	Lenovo Corporate Research and Development Centre <i>Summer Intern, Critical Systems Team for IdeaCentre</i>	<i>2009</i>
RELATED COURSEWORK	Computer Vision (Berkeley and Princeton) Image Manipulation and Computational Photography (Berkeley) Machine Learning (Berkeley and Princeton) Artificial Intelligence (Berkeley) Robotics (Berkeley) Computer Graphics (Berkeley) Automated Reasoning (Princeton) Efficient Algorithms and Intractable Problems (Berkeley) Advanced Computer Systems (Princeton) Programming Languages and Compilers (Berkeley) Machine Structures (Computer Architecture) and Data Structures (Berkeley)	Structure and Interpretation of Computer Programs (Berkeley) Digital Electronics (Berkeley) Numerical Analysis (Berkeley) Abstract Algebra (Berkeley) Real Analysis (Berkeley) Complex Analysis (Berkeley) Linear Algebra (Berkeley) Linear Algebra and Differential Equations (Berkeley) Discrete Mathematics and Probability Theory (Berkeley) Multivariate Calculus (CSUF) Calculus (CSUF)
COMPETENCIES	Programming Languages: C++, CUDA, Matlab, HTML, CSS, Python, Java, C/C, Objective-C, MIPS, JavaScript, jQuery, PHP, Visual Basic, ASP.NET, MySQL/SQL, L ^A T _E X	
	Additional Proficiencies: website development, mobile application development, piano (15 years)	