

# AUSTIN MYERS

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4426 A. V. Williams Building ◊ College Park, Maryland 20740

## EDUCATION

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<b>University of Maryland, College Park</b> <i>Ph.D. in Computer Science</i>	<i>Expected May 2016</i> GPA: 3.93/4.00
<b>University of Maryland, College Park</b> <i>B.S. in Computer Engineering, Gemstone Honors</i>	<i>May 2010</i> GPA: 3.74/4.00

## RESEARCH INTERESTS

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I am interested in how robots can interact with the world using visual perception.  
*Computer Vision, Cognitive Robotics, Machine Learning, Deep Learning, Artificial Intelligence.*

## RESEARCH EXPERIENCE

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<b>Center for Automation Research, UMIACS<sup>1</sup></b> <i>Graduate Research Assistant</i>	<i>January 2012 - Present</i> College Park, MD
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**Advisor:** Dr. Yiannis Aloimonos

**Co-Advisor:** Dr. Cornelia Fermuller

- Developed algorithms to identify the functionality of object parts using deep learning and segmentation on RGB-D data.
- Designed methods to analyze segmented parts from collections of 3D models.
- Evaluated object detection using kernel descriptors for RGB-D data, to efficiently recognize objects in clutter using attention mechanisms.

<b>Goddard Space Flight Center, NASA<sup>2</sup></b> <i>Research Intern</i>	<i>June 2011 - August 2011</i> Greenbelt, MD
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- Advised a team of undergraduate interns on a project to allow groups of interplanetary robots to map terrain using simultaneous localization and mapping (SLAM).

<b>Center for Automation Research, UMIACS<sup>1</sup></b> <i>Graduate Research Assistant</i>	<i>June 2010 - January 2011</i> College Park, MD
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**Advisor:** Dr. Hanan Samet

- Developed a system and algorithms to detect image duplicates among large-scale image data dynamically collected from social media and Internet news sources.

<b>Center for Automation Research, UMIACS<sup>1</sup></b> <i>Undergraduate Research Assistant</i>	<i>June 2009 - August 2009</i> College Park, MD
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**Advisor:** Dr. Larry Davis

- Analyzed pictorial structures and deformable part models for object detection.

<b>Graphics and Visual Informatics Laboratory, UMIACS<sup>1</sup></b> <i>Undergraduate Research Assistant</i>	<i>June 2008 - August 2008</i> College Park, MD
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**Advisor:** Dr. Amitabh Varshney

- Engineered software to perform 3D Reconstruction of multi-view video data.

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<sup>1</sup>University of Maryland Institute for Advanced Computer Studies

<sup>2</sup>National Aeronautics and Space Administration

## PUBLICATIONS

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**Austin Myers**, Ching L. Teo, Cornelia Fermüller, and Yiannis Aloimonos. Affordance detection of tool parts from geometric features. In *IEEE International Conference on Robotics and Automation (ICRA)*, 2015. **(Submitted)**

**Austin Myers**, Angjoo Kanazawa, Cornelia Fermüller, and Yiannis Aloimonos. Affordance of object parts from geometric features. In *RGB-D: Advanced Reasoning with Depth Cameras: Robotics Science and Systems (RSS)*, 2014.

**Austin Myers**, Angjoo Kanazawa, Cornelia Fermüller, and Yiannis Aloimonos. Affordance of object parts from geometric features. In *Vision Meets Cognition Workshop: IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.

Ching L. Teo, **Austin Myers**, Cornelia Fermüller, and Yiannis Aloimonos. Embedding high-level information into low level vision: Efficient object search in clutter. In *IEEE International Conference on Robotics and Automation (ICRA)*, 2013.

## PROFESSIONAL ACTIVITIES

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**Seminar Organizer** *Fall 2012 - Present*

- One of the main organizers of the Computer Vision Student Seminars (CVSS) at the University of Maryland, College Park.

**Student Volunteer** *June 2013*

- Volunteer at the 2013 CVPR conference in Portland, Oregon.

**Visiting Researcher** *June 2013 - July 2013*

- Telluride Neuromorphic Workshop 2013, Telluride Colorado.

**Visiting Researcher** *June 2011 - July 2011*

- Telluride Neuromorphic Workshop 2011, Telluride Colorado.

## TEACHING

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CMSC733: Computer Processing of Pictorial Information. *Fall 2012*

CMSC412: Operating Systems. *Fall 2011*

CMSC216: Introduction to Computer Systems. *Fall 2011*

CMSC122: Introduction to Computer Programming via the Web. *Spring 2011*

## RELEVANT COURSEWORK

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Image Understanding	Machine Learning	Computational Geometry
Image Segmentation	Computational Linguistics	Convex Optimization
Image Processing	Information Visualization	Operating Systems
Controls and Robotics	Algorithms	Data Structures

## AWARDS

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University of Maryland Deans List *Fall 2006, Spring 2008 - Spring 2010*

UMCP Presidents Scholarship Award *Fall 2006 - Spring 2010*

A. James Clark School of Engineering Scholars Award *Fall 2006 - Spring 2010*

Maryland Distinguished Scholar Award *Spring 2006 Spring 2010*

## TECHNICAL SKILLS

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**Languages:** C, C++, MATLAB, Java, Python, CUDA

**Operating Systems:** Linux/Unix, Windows, OS X

**Tools:** Latex/Tex, Emacs, Robot Operating System (ROS), Point Cloud Library (PCL)