

Thomas Weng

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RESEARCH INTERESTS

I am interested in Human-Robot Interaction and Robot Task Learning. My research objective is to develop computational models of both socially and situationally intelligent robots.

EDUCATION

2011 - 2015	B.S. Computer Science & B.A. Economics , Yale University GPA: 3.77 with distinction in the C.S. major SENIOR PROJECT: Real-time robot perception of human nonverbal behavior ADVISORS: Brian Scassellati, Henny Admoni Designed and implemented a perception system for robots to detect human gazing and pointing gestures. Evaluated the system on a task involving object disambiguation through social cues.
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RESEARCH EXPERIENCE

Current JUL 2017	Research Staff Human-Centered Robotics Lab, University of Washington PI: Maya Cakmak Developing situated interfaces for human-robot communication using robot-mounted projectors. Currently constructing a model to optimize the placement of projected annotations, accounting for occlusions and the viewer's perspective.
2014 - 2015	Research Assistant Social Robotics Lab, Yale University PI: Brian Scassellati Worked with Henny Admoni on robot generation of social nonverbal behavior and the effect of such behaviors on task performance in human-robot collaborations.

PUBLICATIONS

- 2016 Admoni, H., **Weng, T.**, and Scassellati, B. Modeling communicative behaviors for object references in human-robot interaction. In *IEEE International Conference on Robotics and Automation (ICRA)*, pages 3352-3359. Acceptance rate: 35%
- 2016 Admoni, H., **Weng, T.**, Hayes, B. and Scassellati, B. Robot nonverbal behavior improves task performance in difficult collaborations. In *ACM/IEEE International Conference on Human Robot Interaction (HRI)*, pages 51-58. Acceptance rate: 25%

AWARDS AND HONORS

- 2015 **Computer Science Research Prize**, Yale University
Awarded to the graduating senior who, in the judgment of the Computer Science faculty, ranks highest in research.

AWARDS AND HONORS, CONT.'D

- 2014 **Trumbull College Scholarship for Economics**, Yale University
- 2011 **Trinity School Faculty Award**, Trinity High School
Awarded by the faculty in acknowledgement of such qualities as cooperation, patience, extra effort, and thoughtfulness.

OUTREACH

- 2017 **Robotics Review Newsletter**
Writing weekly newsletter to cover robotics developments in research, industry, and policy. Written for the public, the newsletter seeks to counteract growing media sensationalism about robots and AI.
- 2017 **Code Haven at Yale guest speaker**, New Haven
Spoke with middle school students at under-served New Haven public schools about STEM education and career opportunities.
- 2015 **Trumbull College Mellon Forum**, Yale University
Presented thesis at a selective opportunity for seniors to share their projects with peers in an intellectually stimulating and congenial setting.
- 2015 **Yale Social Robotics Lab open house**, Yale University
Demonstrated the nonverbal behavior project at semi-annual open house for the public, drawing approx. 100 adults and children from the greater New Haven community.

INDUSTRY EXPERIENCE

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| SEP 2015 -
JUL 2017 | Software Engineer 2
Bing Answers, Microsoft Corporation, Bellevue, WA
Built a Q&A feature on the Bing search results page to display workplace-specific answers for enterprise clients. Shipped nine interactive Bing answers relating to the 2016 U.S. elections, generating 100 million impressions over the year. |
| SUMMER
2014 | Software Engineer Intern
Bing Answers, Microsoft Corporation, Bellevue, WA
Built WordPress plugins for Bing widgets, enabling third party WordPress sites to add relevant images and other content from Bing to their web pages. |
| SUMMER
2013 | Program Manager Intern
Bing Ads, Microsoft Corporation, Bellevue, WA
Delivered a service health page for the Bing Ads API service, managing the project end-to-end. |
| SUMMER
2012 | Credit Risk Management Intern
Credit Risk Office, JPMorgan Chase & Co., New York, New York
Wrote VBA scripts to automate workflows on setting trading restrictions, reducing the firm's exposure to operational risk. Reviewed New Business Initiative Approvals for new JPMorgan ventures. |

TECHNICAL SKILLS AND TRAINING

- Software C/C++, Python, C#.NET, Java, JavaScript, R, Octave/MATLAB, SQL[0.07cm]
Relevant frameworks: ROS, OpenCV, MoveIt!, Tensorflow, React

TECHNICAL SKILLS AND TRAINING, CONT.'D

Hardware PR2, Aldebaran Nao, Rethink Robotics Baxter, 6DOF Kuka KR210,
Kinect, Raspberry Pi, Arduino

Courses	Robotics	Artificial Intelligence	Machine Learning
	Udacity Nanodegree	Udacity Nanodegree	Coursera
	Term 1 completed Nov 2017	Term 1 completed May 2017	Completed 2014
	C++, Python, ROS	Python	Octave/MATLAB