

Jon W. Wetzel

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Objective

A full-time position in computer science research/engineering with a focus on artificial intelligence and/or human-computer interaction.

Education

Northwestern University (Evanston, IL)

Ph.D. candidate in Computer Science with Cognitive Science Specialization, Anticipated September 2014

Dissertation: A Framework for Understanding and Critiquing Multi-Modal Engineering Design Explanations

Massachusetts Institute of Technology (Cambridge, MA)

M.Eng. in Computer Science and Engineering, June 2007

Thesis: Face Interface: A Methodology for Experiential Learning of Input Modalities

B.S. in Computer Science and Engineering; GPA 4.4/5.0, June 2006

Experience

Northwestern University Qualitative Reasoning Group

Sept. 2007 - Present

CogSketch Design Coach Project (Thesis)

- Developed an intelligent coaching system to help decrease anxiety and increase skill of first year engineering students in the area of engineering design sketching
- Created a multi-modal input system that converts design explanations consisting of sketches and language into representations suitable for teleological, qualitative reasoning
- Implemented a feedback system that critiques students' explanations and provides explanations of the reasons behind those critiques (all code for this Thesis has been done in LISP)
- In Fall 2012, measured a significant decrease in anxiety for students using Design Coach compared to a control
- Published and presented work in IAAI (2009) and others (see homepage for full CV)

Massachusetts Institute of Technology Media Lab

Feb. 2004 - June 2007

Context Aware Computing Department Research Projects

- Designed and implemented Attention Meter which uses face detection to gauge the visual attention of a group. Awarded U.S. patent 8,594,838 for subsequent work
- Created computer vision programs for the Smart Sink, adjusting to user's height and recognizing objects inside
- Implemented user interface for Context Aware Kitchen using sensors and a logic based system to guess the intentions of the user and display useful information

Microsoft Corporation

June - Sept. 2006

Internship with Windows Live Messenger Client Team

- Implemented a new feature for the Messenger Client
- Work included writing a developer specification and C++ code for the platform and user interface
- Feature was selected for next release, and estimated to generate \$10M in revenue

Dell Incorporated

June - Aug. 2004, June - Aug. 2005

Internships at Linux Development Lab

- Researched and designed an automated testing framework for Linux servers and workstations
- Implemented framework in Python using XML-RPC
- Wrote, tested, and successfully submitted a patch for the Linux kernel (in C) to add a permanent mac address field to the network device representation

Skills

Experience with C, C++, Java, Python, BASH, HTML, CSS, and Common Lisp

Awards

National Science Foundation Graduate Research Fellowship 2008 - 2011