

# Brian Romanowski

## Contact

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## Education

### **Masters of Science in Computer Science**

- Michigan State University, September 2009 - December 2011
- GPA: 3.64/4.00
- Dr. Joyce Chai, advisor

### **Bachelor of Science in Electrical Engineering**

- University of Illinois at Urbana-Champaign, August 1997 - December 2002
- GPA: 3.12/4.0
- GRE Scores: quantitative 800/800; qualitative 740/800; analytical 5.0/6.0

### **Relevant Coursework and Experience**

- Language Processing, Machine Learning, Algorithms, Databases, Networking
- Java, Python, SQL, HTML, CSS, Javascript, PHP, Matlab, C, Linux

### **University Projects**

- Won \$1100 for a team project combining social networking and genetic algorithms (2008)
- Speech recognition using hidden Markov models on floating-point DSP hardware (2002)
- Speaker recognition using dynamic time warping on fixed-point DSP hardware (2002)
- Autonomous robot design and construction, Jerry Sanders Design Contest (2000)

## Publications

McClain, M. and Romanowski, B., "Speech endpoint detection with non-language speech sounds for generic speech processing applications," SPIE Defense, Security, and Sensing, 2009. Accepted for oral presentation.

## Work Experience

### **Research Assistant**

**(January 2011 – December 2011)**

Dr. Joyce Chai

Researched improvements to speech recognition using eye gaze and incremental deep semantic analysis. Built a demonstration dialogue system integrating vision processing, speech recognition, constraint-based reasoning, dialogue management, and robot actions.

Lectured for the latter half of an undergraduate "Introduction to Artificial Intelligence" course. Presented fifteen 80-minute lectures on first-order logic, Prolog, probability, and supervised learning.

**Research Intern****(May 2010 - August 2010)**

Honda Research Institute Japan

Researched statistical classification-based methods to detect out-of-vocabulary (OOV) words in spoken dialogue.

**Teaching Assistant for EGR 100 - Engineering Design**

Michigan State University

**(September 2009 - December 2010)**

Presented short lectures to two lab sections, each with 40 students from a variety of engineering disciplines. Assessed weekly technical writing assignments, oversaw the progress of student projects, and was responsible for the safety of students in an industrial workshop.

**Senior Research Scientist****(September 2006 - May 2009)**

21st Century Technologies

Wrote and won a proposal for a \$750,000 Department of Defense Small Business Innovation Research (SBIR) grant. Wrote, won, and led research on the previous \$70,000 grant to investigate the use of neural network technologies for large-scale textual data fusion.

Researched problems including the semantic search of online chat dialogue, pitch detection for use in the identification of non-language speech sounds, and entity resolution in social networks. Launched and managed monthly brown bag research talks.

**Web Accessibility Developer****(January 2006 - August 2006)**

Center for Information Technology Accessibility, University of Illinois

Developed tools to inspect and debug Web pages for compliance with emerging W3C accessibility standards involving Mozilla Firefox extensions, Javascript, XML, and RDF. Helped develop our HTML Best Practices for accessibility and accessible AJAX demonstrations.

**Information Technology Volunteer****(November 2003 - October 2005)**

U.S. Peace Corps

Taught high school computer and science courses in Niuatoputapu, Tonga. Created a computer theory course to establish basic computer literacy and improve problem solving, English, and math skills for students in a school with infrequent computer access.

**Control Research Assistant****(May 2002 - August 2002)**

University of Illinois at Urbana-Champaign

Designed, built, and tested surface-mount circuit boards for a National Science Foundation temperature control project. Developed code in assembly, C, and Matlab for a Texas Instruments digital signal processor used in the classroom.

**Firmware Engineer Internship****(June 2000 - December 2000)**

Hewlett-Packard

Coded server firmware in C, implemented support tools using Linux utilities and Perl, and wrote project design documentation.