

Peter Mawhorter

pmawhorter@gmail.com

EDUCATION

Harvey Mudd College, Claremont, California, *B.A., distinction and honors in computer science, May 2008*
Claremont High School, Claremont, California, *June 2004*

SKILLS AND ABILITIES

Professional Skills

- Conduct thorough research using statistical data and secondary sources
- Convey ideas through written reports, visual materials, and presentations
- Collaborate and assist others with research and learning
- Plan, implement, and carry out projects independently

Programming Languages

- Highly experienced in Python
- Experienced in C/C++
- Have worked with Java, Rex, Scheme, ISCAL, Prolog, Standard ML, SQL, MATLAB
- Learn new programming languages quickly

Hardware

- Experience with microcontrollers including the open-source Arduino platform
- Experience writing servo control, sensor interface, and serial interface code for microprocessors

Operating Systems

- Expertise with Linux and Unix systems
- Have worked with SOS and OS/161; research and teaching operating systems
- Experience with Windows XP and Mac OS X

Web Development

- Experience with HTML, CSS and Javascript
- Have constructed multiple static and dynamic web pages using Python CGI techniques
- Experience building submissions interfaces, web controls, gallery software

EXPERIENCE AND RESEARCH

Volunteer Web Consultant, International Humanitarian Foundation, Boston, Massachusetts

Heidi McAnnally-Linz, September 2008-Present

Assist executive director with site maintenance and updates at www.internationalhf.org and www.justapparel.org. Provide technical assistance to enhance ecommerce functionality and achieve desired content designs.

Web Developer and Technical Consultant, Dan Ionescu Architects and Planners, San Mateo, CA

August 2008-Present

Work with DIAP to design, build, and maintain company website (www.diap.com). Built original Python CGI scripts to accommodate DIAP's design criteria.

Research Assistant, Robotics, Harvey Mudd College, Claremont, California

Professor Dodds, Summer 2008

Built a collection of inexpensive robots with single-camera vision systems to implement FastSLAM on affordable platforms. Demonstrated working FastSLAM-based mapping on several platforms at AAAI 2008. Published a joint paper titled "Mapping for All" in *Proceedings of the 2008 AAAI Robot Exhibition and Workshop*.

Teaching Assistant, Operating Systems, Harvey Mudd College, Claremont, California

Professor O'Neill, Fall 2007

Research Assistant, Bernard Field Station Network, Harvey Mudd College, Claremont, California

Professor Erlinger, Summer 2007

Built and deployed a wireless sensor network for collecting micro-climate data. Assisted with porting driver code from version 1.x to version 2.x of the mote operating system SOS. Developed library code for interfacing with SOS and contributed to the SOS Subversion repository. Constructed data logging and web control software to manage an ad-hoc wireless sensor network. Documented procedures and created a tutorial to accelerate future work. Successfully deployed a network of motes in the Bernard Field Station and collected temperature data.

Teaching Assistant, Principles of Computer Science, Harvey Mudd College, Claremont, California

Professors Alvarado and Dodds, Spring 2007

Teaching Assistant, Introduction to Computer Science, Harvey Mudd College, Claremont, California

Professors Alvarado, Dodds, and Libeskind-Hadas, Fall 2006

Academic Assistant, Introduction to Computer Science Course Redesign, Harvey Mudd College, Claremont, California

Professors Alvarado, Dodds, and Libeskind-Hadas, Summer 2006

Designed course website, tested course materials, constructed submissions and grading tools, assisted with construction of Harvey Mudd Miniature Machine mock assembler and interpreter. Used TWiki software and the Python programming language.

Swim Instructor and Lifeguard, Pomona College Summer Swim Program, Claremont, California

Summer 2004, Summer 2005

PUBLICATIONS & WEBSITES

- o Mawhorter, P., Shaver, E., Koziol, Z., and Dodds, Z. "Mapping for All" *Proceedings of the 2008 AAAI Robot Exhibition and Workshop*, Chicago, IL, July 13-17, 2008, AAAI Press.
- o www.cs.hmc.edu/~pmawhorter - Design, construction, maintenance, content.
- o www.diap.com - Script and backend design, construction.
- o www.internationalhf.org - Maintenance and custom page creation.
- o www.justapparel.org - Minor maintenance.

HONORS

- o **Service Award**, *Computer Science Department, Harvey Mudd College*
- o **Dean's List, Harvey Mudd College**, *Spring 2005, Spring 2006, Fall 2006, Spring 2007, Fall 2007, Spring 2008*
- o **Harvey S. Mudd Merit Award**

LANGUAGES AND OVERSEAS EXPERIENCE

- o Speak German and Japanese
- o Lived in Bielefeld, Germany from 1996 to 1997
- o Lived in Edinburgh, Scotland from 1993 to 1994
- o Traveled extensively in Europe and America

INTERESTS

- o Psycholinguistics, cognitive science, AI and natural language processing
- o Robotics and human-computer interaction
- o Real-time-strategy, Go, and general game-playing agents
- o Humanities concentration in philosophy, interested in epistemology, particularly skepticism
- o Outdoor activities including cycling, ultimate, soccer, rock-climbing, longsword and Capoeira
- o Flute and computer-generated music
- o Wire sculpture and photography
- o Role-playing and video games, including game design and engines