Matt Hammond
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Current Address:
1239 19th Street Apt. 10
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Permanent Address:
1401 Stonecreek CT
Martinez, CA 94553

Education:
B.S. Electrical Engineering and Computer Science, Honors, 2010
University of California, Berkeley
Overall GPA: 3.69 (4.0 scaled)

Current M.S. Student, Biomedical Engineering specializing in Neuroengineering
University of California, Los Angeles
Overall GPA: 3.54 (4.0 scaled) Expected Graduation: Fall 2011

Summary of Skills, Graduate Experience:
- Programming experience in C, Python, Java, C++, Lisp/Scheme, MATLAB/Simulink, Labview, Objective-C/iPhone development and MIPS assembly.
- Circuit simulation in SPICE.
- Digital design targeting FPGAs in Verilog.
- PCB layout design in ExpressPCB and Eagle.
- Experience studying the biomechanics of living organisms for the purpose of biomimetics in robotics and other fields of engineering.
- Graduate neuroscience courses in developmental, cellular, molecular, and systems neuroscience, electrophysiology, neuroanatomy, and engineering solutions to problems of a neuroscientific basis.

Projects:
- Wrote a spatial database program in Java involving quadtree data structures to track the positions of moving objects.
- Helped design and build a one-man solar car for the UC Berkeley Solar Car Team.
- Wrote a program to evaluate simple mathematical expressions in MIPS assembly language.
- Designed a three-stage, pipelined, reduced instruction set MIPS CPU and line-drawing engine in Verilog running on an FPGA.
- Designed a control system to balance an inverted pendulum mounted on a movable cart, as well as an LED/photodiode-controlled maglev system.
- Designed and built a wall climbing robot utilizing electromagnets mounted on arms made from a Bioloid robotics kit, controlled via MATLAB. Followed a path of arrows detected via webcam.
- Performed experiments exploring shear and drag forces on Taraxacum officinale, the common dandelion, investigating the influence of mechanical structure on seed dispersal patterns.
- Worked on a team to compete in the 2010 NATCAR autonomous model car competition, involving PCB design, magnetic sensor placement and characterization, speed and steering control algorithm design, power regulation, and track memorization. Fourth place overall.

Work Experience:

June-September, 2010 University of California, Berkeley
- Assistant Engineer for the EECS instructional support group.
- Principal task was to provide previously used Nintendo 64 controllers with wireless and inertial sensing capabilities.

August-December, 2009 University of California, Berkeley
- Head TA for EE 145L, a lab based sensor and actuator-focused design course at UC Berkeley.

June-August 2006, June-August 2007- Score! Learning Center
- Tutor for students PreK-12.

Extracurricular:
- Former Race Manager of CalSol, the UC Berkeley Solar Car team.
- Member of Eta Kappa Nu, Electrical Engineering and Computer Science Honors Society.