

# Star A. Simpson

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## E d u c a t i o n

### **Massachusetts Institute of Technology**

Bachelor of Science in Electrical Engineering and Computer Science expected 2012.

## E x p e r i e n c e

### **MonkeyLectric LLC**

**Summer 2009**

Wrote embedded C on Atmel AVR for persistence of vision bicycle wheel displays. Made molds for potting exotic-shape boards using SolidWorks CAD and MasterCAM.

### **MIT Biomolecular Materials Group**

**Spring 2008**

Designed and built a test chamber to characterize a virus-based catalyst for on-board reforming of hydrocarbon or alcohol-based fuels into hydrogen gas suitable for use in a fuel cell.

### **MIT Media Lab, Personal Robots Group**

**Spring 2008**

Created a posture-sensing shirt to encourage back and spine health via tactile feedback.

### **Intern, Squid Labs/Makani Power**

**Summer 2007**

Designed a boost converter circuit for converting wind power into electricity for charging an array of LiPoly batteries. Wrote the software interface for monitoring a high voltage (300VDC) battery array. Created applications in a Python variant for Series 60 Symbian cell phones to monitor load cell sensors in extreme environments.

### **MIT Media Lab, Personal Robots Group**

**Spring 2007**

Worked to construct and deploy the first Autom, a socially-interacting robot designed to encourage people to meet their weight loss goals by tracking and encouraging their efforts.

### **MIT Media Lab, Tangible Media Group**

**Fall 2006**

Worked on the "PingPongPlus" - a technically augmented, visually responsive ping-pong table.

### **Optician Apprentice, MOSAIC Labs of Oceanit; Maui, HI**

**Summers 2004-2006**

Generated optical parts by grinding and polishing glass, and machined optical accessories. Used interferometers for surface metrology. Used AutoCAD and Mechanical Desktop for drafting, ZEMAX lens system design program and Zygo MetroPro interferometry software. Designed and fabricated printed circuit boards.

### **Intern, Akimeka LLC; Maui, HI**

**Summer 2005**

Worked with Akimeka's "Digital Bus" K-6 educational outreach project. Instructed students, built servers, and developed an island-wide wifi network to support the bus-based high school science lab.

## O t h e r

### **MIT Electronic Research Society, President**

**2007-2008**

President of MITERS, a student run EE lab, machine shop and invention lab