

# ARTHUR J PETRON

195 Binney Street, #2226, Cambridge MA 02142

petron@mit.edu 717.880.0255

## Education

Massachusetts Institute of Technology (MIT)

Candidate for Master of Science in Media Arts and Sciences    GPA: 5.0/5.0    Expected June 2010  
Bachelor of Science in Mechanical Engineering    Received June 2008

**Relevant Coursework:** Product Design Processes (Ethics, Specification, Customer Needs Analysis, Human Factors, Benchmarking), Motion Control Systems, Production Methods, Manufacturing Processes, Robotics, Thermofluids.

## Work Experience

**MIT Media Laboratory – Research Assistant (Smart Cities)**    Cambridge, MA, September 2007 to present  
(programming, product design, assembly, machining, electrical engineering)

- Fabricated PCBs to allow for transmission of analog data over the IEEE 802.15.4 wireless protocol and motor control of three-phase BLDC and stepper motors.
- Engineered a beta production prototype of the GreenWheel, an electric bicycle with custom sensors, motor, and electronics for motion control and battery management.

**Schlumberger – Research Scientist**    Cambridge, MA, June 2009 to present  
(linkage analysis, product design, mathematical analysis)

- Created mathematical models of mechanical devices for use in the field.
- Innovated new mechanical methods for tasks involving oil mining.

**Idealab – Prototype Design Engineer**    Pasadena, CA, January 2008  
(prototyping, product design, systems modeling)

- Designed and prototyped new low cost systems for solar concentrators.
- Deduced a third-order equation for a variable radius spindle for solar positioning systems.

**Apple Inc. – Product Design Engineer**    Cupertino, CA, Summer 2007  
(programming, product design, part integration, wireless technology)

- Developed software that defines a relative scale wireless sub-system test.
- Prototyped production level parts for various products, including a wireless keyboard.
- Coordinated suppliers and third-party researchers with current projects.

## Skills

### Software

Linux, Mac, Windows, SolidWorks, AutoCAD, NX3, NX4, NX5, Rhino, Photoshop, Matlab, MathCAD, CorelDraw, MasterCAM, Pro-E, OMAX Make and Layout

### Programming Languages/Electrical Engineering (in order of expertise)

Python, Perl, C++, C, HTML, Javascript (plus AJAX), Java, Cocoa, PCB layout (smt and through), Atmel Processors, Digital Logic, Some Power Electronics

### Machines and Tools

Mill, Lathe (both manual and CNC), General Shop Machines, 3D printers, OMAX Water-Jet, Laser-Cutter (Universal and Trotec), Welder (mig, tig), Vacuum Former, Brazing

### General Skills

Residential Electrical Wiring, Barn/Garage/House Construction, Large Vehicle Operation (Tractors, Backhoes), Tree Felling, Strong Familiarity with Manufacturing Facilities

## Interests

Caving, Climbing (top-rope and bouldering), Robotics, Locksmithing, Running, Hiking, Camping, Interior Decoration, Wood Carving, Gourmet Cooking, Poi, Bioinformatics, Origami