

# ARTHUR J PETRON

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## Education

Massachusetts Institute of Technology (MIT)

Candidate for Ph.D Media Arts and Sciences (prosthetic design)

Master of Science in Media Arts and Sciences GPA: 5.0/5.0

Received September 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, Sept. 2007 to Sept. 2010

(programming, part design, assembly, machining, electrical engineering)

- 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 2010

(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, design, systems modeling, CAD)

- 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

(part integration, wireless technology, CAD)

- Developed software that defines a relative scale wireless sub-system test.
- Prototyped production level parts for various products.
- 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, Prosthetics