

# JASON YOSINSKI

1805 Seclusion Pt. Apt. J, Colorado Springs, CO 80918  
Email: jason@yosinski.com Cell: (719)440-1357

---

## EDUCATION

---

B.S. in Mechanical Engineering, Minor in Control and Dynamical Systems,  
**California Institute of Technology** (GPA 3.8/4.0)

*June 2006*

---

## APPLICABLE COURSES

---

- |                              |                              |                          |
|------------------------------|------------------------------|--------------------------|
| • Classical Mechanics,       | • Advanced Thermodynamics    | • Learning Systems       |
| Electromagnetics             | • Fluid Dynamics             | • Differential Equations |
| • Statics and Dynamics       | • Engineering Design         | • Quantum Mechanics      |
| • Control System Design      | • Mechanical Engineering Lab | • Programming Methods    |
| • Statistical Physics, Waves | • Multivariable Calculus     | • Computational Vision   |

---

## WORK EXPERIENCE

---

**Caltech DARPA Grand Challenge Team** – [www.darpa.mil/grandchallenge/](http://www.darpa.mil/grandchallenge/) *March 2004 – June 2006*

- Invented a novel, accurate terrain difficulty sensor employing an Inertial Measurement Unit
- Designed and integrated an efficient path generation module with dynamic feasibility checking
- Designed, coded, and debugged many other modules, both individually and via collaboration
- Taught classes on Linux and Subversion for new team members; often advised others on Linux, C++, build system, data logging, interfaces, and other issues
- Authored second most lines of code among 25 team members
- Completed my Senior Thesis on one of the first LADAR based road tracking algorithms

**Caltech** – Tutor for the Caltech Y

*October 2003 – June 2006*

- Successfully motivated unenthusiastic students to learn concepts in a broad range of subjects
- Quickly gained the trust of middle and high school students

**Designed/Built Own House**

*April 1999 – May 2001*

- Designed and constructed 90% of our new 8000 sq. ft. house with my family
- Motivated myself to work nearly every day after school for 2 years, often in inclement weather
- Successfully learned and assumed the role of architect, framer, plumber, mason, and electrician. Work was subject to review by state inspectors.
- Calculated heat loss for all rooms; designed a heating system with appropriately sized components
- Designed plumbing and water recirculation system for minimum pressure drop under load and immediate hot water availability; installed the same.
- Reliably completed long-term, unsupervised, self-taught work from general, high-level objectives

---

## ENGINEERING RELATED AWARDS

---

**Stirling Engine**

*November 2005*

- Objective: Build a working Stirling Engine. Result: Our two-person team built not only the most efficient Stirling Engine, but also the only one that worked the first day it was tried.

**Toothpick Bridge**

*March 1996*

- Objective: Construct a 25 cm long bridge to carry as much weight as possible using only glue and two boxes of toothpicks. Result: Bridge broke at 405 pounds, more than twice the previous record.

---

## OTHER TECHNICAL SKILLS

---

**Programming Languages** – C, C++, Matlab, Bash Scripts, XHTML, CSS, PHP, Visual Basic, Scheme

**Software** – Linux, Mac OS X, Windows, Subversion, Doxygen, Bugzilla, MS Office, Mathematica

**Shop** – Metal, Wood (mill, lathe, band saw, other common tools)

---

## LEADERSHIP SKILLS

---

### **Avery House Council**

Transitioned my Caltech dorm into Avery House, the first new House in 46 years. Penned the new House Constitution. Successfully negotiated with and persuaded initially opposed students and administrators.

### **Avery House Social Team Director**

Initiated and planned weekly meetings and events, delegated work, encouraged House members to participate.

**Other** – Freshmen Admissions Committee, Student Government, Caltech Diversity Committee

---

## CURRENT ACTIVITIES

---

Since my graduation this past June, I've had time to catch up on some of my other interests:

**Web Development** – Studied how to use Apache, MySQL, PHP, and CSS in order to produce dynamically generated, standards compliant websites.

**Machine Learning** – Read *On Intelligence*, by Jeff Hawkins, and *Neural Network Design*, by Martin T. Hagan et al. Implemented several learning algorithms in Matlab.

**Cryptography** – Read *PGP: Pretty Good Privacy* by Simson Garfinkel, as well as several online articles; wrote an implementation of the RSA public-key encryption algorithm as a proof of concept.