

# Jonathan Reynolds

Fort Collins, CO 80526

[euio76@gmail.com](mailto:euio76@gmail.com)

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April 10, 2006

I am currently a senior at Colorado State University majoring in mechanical engineering expecting to graduate May 12, 2006. I am pursuing a challenging career within mechanical engineering that utilizes my specific skill set of real-time and control systems along with my problem solving abilities.

At Woodward Governor, I designed, specked, ordered, built, programmed, and troubleshot automated test systems for CNG and LP regulators. These auto-tests are unique to this industry, and have placed Woodward in a unique position, which has already helped them gain a large customer.

My senior design project consists of designing and building a control system for a robot with the purpose of competing at an urban search and rescue competition. Even though I have worked at an internship 20+ hours per week, I have been able to put in 20-35 hours per week on this project. I have been responsible for microprocessor selection and programming, autonomous map making, and building the user's computer interface.

For one recent class project, I attempted to build my own self-balancing robot with an abundance of functionality. For more information on this and other projects as well as examples of my Pro/Engineer solid modeling ability, please go to <http://resume.jonandco.com>.

While at Colorado State University's Engines and Energy Conversion Laboratory, I was a key component in testing and building equipment for an experimental ignition system used on large bore natural gas compression engines. I also vastly increased my ability to use Pro/Engineer's solid modeler and FEA package.

During my two years at Advanced Energy, I greatly expanded my electronics knowledge and increased my troubleshooting abilities. I used o-scopes, multi-meters, and schematics rather extensively to troubleshoot test equipment.

I consider creativity to be one of my best attributes. This provides me with the ability to look at a problem or concept in many different ways and come up with unique solutions.

I would appreciate the opportunity to further discuss my ability to fit into an engineering position here. I am available at (970) 222-9295. Thank you for your time and consideration.

Sincerely,

**Jonathan Reynolds**

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**Objective** To obtain an occupation in mechanical engineering using my creativity and specific skill set in real-time and control systems.

**Education** **B.S., Mechanical Engineering.** **GPA: 3.1**  
2002–Present Colorado State University Ft. Collins, CO

- Expected graduation: May 2006
- **3.2 GPA** cumulative for engineering classes only.
- **3.4 GPA** last semester.
- Control Systems, Mechatronics and Measurement Systems, Materials Engineering.

**Urban Search and Rescue Robot, Controls Design Team**

- Third Place project for CSU's ME Engineering Days 4/14/06.
- Designed and developed software user interface using Labview.
- Extensive use of "C" and "Basic" programming languages for 68HC12 and PIC microcontrollers.
- Responsible for creating a mapping algorithm with a laser scanner and microcontroller.

**A.S., (Pre) Engineering.** **GPA: 3.6**  
1998–2000 Seward County Community College Liberal, KS

- Graduated Cum Laude.
- Phi Theta Kappa, Honor Society, Historian.
- Presidential Scholarship for full tuition and books.

**Experience** **Mechanical Engineering Intern**  
5/05–Present Woodward Governor Co. Ft. Collins, CO

- Designed, specked, and assembled automated test stations for natural gas regulators.
- Wrote, tested, and implemented Labview code.
- Performed Gauge R&R's, MSA and capability testing and calculations.
- Introduction to six sigma processes in an ISO9001 environment.

**Student Research Assistant**  
9/02–5/05 CSU Engines and Energy Conversion Laboratory Ft. Collins, CO

- Tested experimental ignition system for use on large bore engines.
- Utilized Pro/Engineer's 3D modeling for presentation and simulation analysis.
- Built complete portable control station for experimental ignition system.

**Test Engineering Technician**  
3/02–8/02 Advanced Energy Inc. Ft. Collins, CO

- Built complex electrical and mechanical test fixtures.
- Troubleshoot and fixed electrical components of existing test fixtures.
- Developed solutions for testing problems, including small devices to reduce troubleshooting time for test fixtures.

**Test Engineering Assembler**  
9/00–3/02 Advanced Energy Inc. Ft. Collins, CO

**Computer System Administrator**  
5/98–8/00 B&J Plumbing Supply Liberal, KS

**Software** **Very Proficient:** MS Office (especially Excel), Mathcad, Maple, Labview, and Pro/Engineer  
**Semi-Proficient:** Pro/Mechanica, Gambit, Fluent, and SpcExel  
**Programming Languages:** C, BASIC, HTML, and JavaScript

**Skills** Creativity. Advanced computer skills. Excellent mechanical aptitude. Quick learner.  
Good attention to detail and accuracy. Self-motivated; ability to work independently.

**Interests** Computers. Working on cars. Tutoring. Electronics. Helping at church. Playing bass guitar.