R Y A N P O T T E R

Objective

Seeking employment as a Software Developer in a product area that requires creative and complex problem-solving skills.

Education

1998 – 2002 **University of Colorado at Boulder** Boulder, CO
Degree: Aerospace Engineering
With an Embedded Systems Certification
Emphasis: Propulsion, Aerodynamics, Program Management

1996	Navy Electronics Technician Maintenance School	Pearl Harbor, HI
1994	United States Naval Nuclear Prototype School	INEL, ID
1993 – 1994	United States Naval Nuclear Power School	Orlando, FL
1992 – 1993	United States Nuclear Field ET-A School	Orlando, FL

Recent Programming Experience

2006 – 2007 **3D Game Engine**
- Written in C++ with Visual Studio as a hobby project. Started by reading the book: *Tricks of the 3D Game Programming Gurus*.
- Implements basic physics, lighting, and shaders. Includes a Maya geometry importer. Uses DirectX 9, inheritance, polymorphism. Object Oriented.
- Demonstration at: http://www.rlpotter.com/ryan/projects/rlpEngine/

2004 – 2006 **Autopilots and Feedback Control Systems**
- Simulated and updated 6-DOF and autopilot software for a missile guidance system using test data results from a 4-axis Hardware-In-The-Loop facility.
- Written in C++, Fortran, Ada

2004 **Database Application**
- User application for a housing sales office.
- Written in C#/ADO.

2003 **Real-Time Embedded Operating System**
- Written in C. Rate-monotomic priority-preemptive multitasking real-time operating system with a shell. Written as a hobby project.
- Goal was to get it working in 30 days without reference to how operating systems work. Used semaphores, mutexes, task-control blocks, etc.

Work Experience

2007 – Present **Aerojet – Redmond** Redmond, WA
- Senior Project Engineer: Development, analysis, building, and testing of bipropellant rocket engine systems.
- Systems Engineering capacity, including specification requirements verification, allocation, and flow-down.
- Currently: Lead Project Engineer managing and leading the technical aspect of a very large rocket engine contract. Scheduling, coordinating, tasking of the engineering and procurement teams. Position includes customer meetings, management reviews, team meetings, and weekly supplier management teleconferences. Heavy use of program management concepts. Work closely with the program manager.

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2002 – Present **Lockheed Martin Missiles and Fire Control** Orlando, FL

- Helped with the development and testing of the thermobaric warhead for the Hellfire II missile for rapid deployment to Afghanistan.
- Extensive experience with finite element modeling and simulation of high-speed target impacts for multiple missile programs with Patran and Epic Hydrocode.
- Lead Warhead Engineer for 3 years on the Joint Common Missile program. Significant field testing experience, test planning and conducting experience, and missile test vehicle design and fabrication experience. Heavy customer interaction including design reviews, meetings, and presentations. Subcontractor interaction and management. Program Management environment
- Emphasis on Program Management career development through three annual 1-week long conferences and periodic training classes.

2000 – 2002 **MaCH-SR1 Launch Vehicle Senior Project** Boulder, CO

- Conceived of the project and led the team for two years as the Project Manager and Design/Test Team Lead. This was a very significant project.
- Developed, designed, built, and tested a 1,000 lb thrust hybrid rocket engine. Engine used liquid oxygen and an HTPB fuel that the team developed.
- Wrote custom 3-DOF code to predict performance requirements
- http://www.rlpotter.com/ryan/projects/MaCH-SR1/index.shtml

Summer 2001 **Pioneer AstronauticsInternship** Lakewood, CO

- Researched and Developed small rocket engines using carbon dioxide with exotic fuels for potential use on Mars
- Research and Development of Nitrous Oxide based RCS monopropellant thrusters for use on small spacecraft.

2000 – 2001 **Colorado Space Grant Consortium** Boulder, CO

- Wrote IDL and Perl software to produce web-based data products for the *Citizen-Explorer I* satellite.
- Designed controller hardware and software for the imaging systems aboard the NASA/AFRL *Three-Corner Sat* satellites.

1992 – 1998 **United States Navy Submarine Force** Pearl Harbor, HI

- Operated the nuclear reactor onboard the USS Indianapolis, SSN 697
- Maintained, troubleshot, repaired and all reactor safety equipment and aided with electrical power generation and distribution equipment.
- Supervised junior personnel in Reactor Controls Division.
- Conducted training sessions for division personnel on nuclear power plant operations and theory, and on electrical and electronics theory.
- Rapidly promoted to E-6 rank in 5 ½ years

Skills

Computer Related:

- Experienced with: C/C++, Perl, Matlab
- Exposed to: Visual Basic, C#, ADO, .NET, Verilog, IDL, Fortran, SQL, PHP, HTML, Javascript, Ada, STK, EPIC, Network/System Administration
- Software: Visual Studio, MS Office including Project and Access, UML
- Computer Hardware: Real-time embedded systems experience on the 8051, 68HC12, Pentium

Non-Computer Related:

- Languages: English, Japanese, and Spanish
- Hobbies: Rock Climbing, Video Games, Motorcycles, Piano, 3D Graphics, Licensed Private Pilot
- Other: Technical writing, Project Management, Teaming skills

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