

# Andrew J. Ferguson

## Objective

Work in a creative and challenging environment with a focus on designing and implementing sensing, communication, and control systems for aerospace applications.

## Skills

Highly inquisitive and data driven, strategic problem solver, strong analytical skills, focus on continuous process improvement  
*Engineering* — Mathematica, MATLAB, SolidWorks, Advanced Microsoft Office  
*Programming* — PHP, X/HTML, MySQL, C++, Perl, Java/JS, VisualBasic, VHDL

## Education

**Colorado School of Mines**, Golden, Co.  
Bachelor of Science in Engineering, Electrical Engineering Specialty, 2009

Area of Special Interest: Mechanical Engineering

- *Staff photographer, The Oredigger (university newspaper)* - Covered events and stories working on short notice and constant deadline in a creative style, circulation of 2,700. — 2008-2009
- *Member, Colorado School of Mines chapter of IEEE* — 2005-2009
- *Nakagawa's Exploration Research and Development Students (NERDS)* - Designed rover to compete in NASA's 2008 Lunar Regolith Challenge. Part of Electrical/Computing subsystem group, designed passive and active navigation and collision avoidance systems. — 2007-2008
- *Chief Engineer, CSM Broadcasting Club / Mines Internet Radio (MIR)* Wrote grant proposal, designed initial studio architecture and remote broadcast functionality, maintained studio equipment, and designed web site. — 2005-2007
- *News editor, The Oredigger (university newspaper)* - Managed and wrote articles for the News section (including front page) of student newspaper with a circulation of 2,700. — 2004-2005

## Selection of Engineering Coursework

- Digital Logic
- Engineering Electromagnetics
- Information Systems
- Feedback Control Systems
- Analog and Digital Communication Systems
- Microcomputing Architecture
- Advanced Robotic Control
- Computer Aided Engineering

## For fun

Ski, rock climb, travel, run, solve problems, program, and generally attempt to stay out of extreme trouble

Last Updated: October 26, 2011

This résumé supersedes all previous versions

## Work Experience

**Engineer, Boeing** — May 2006 - Present

*Electronic Systems Design and Analysis Engineer (Level 2), Hardware,*

*— August 2009 - Present*

- Design, select, test, implement, document, and troubleshoot hardware with an emphasis on using Commercial-Off-The-Shelf. Specifically manage console computer, display, peripherals, and units.
- Interface with Air Vehicle, Software Development Environment, Logistics, Ground Support, and other groups to deliver a systems engineering solution.
- Coordinate with myriad suppliers to investigate how technologies are implemented in new products and how such technologies can be leveraged on .
- Manage and perform Installation & Checkout procedure for . Troubleshoot emergent hardware issues during all stages of development and testing, including on-site support for I&CO and Production Qualification Test.
- Managed Requests for Procurement to expediently bring in hardware for evaluation and engineering qualification. Created process documentation for group specific requirements needed to fill out and complete RFP.
- Manage and update lab hardware for engineering testing and development.

*Test Engineer, AirONE (Unmanned Aerial Reconnaissance Vehicle), Opportunities for New Engineers/Experiences at Boeing* — May 2010 - July 2011

- Developed test procedures (including identifying or designing test instrumentation) to verify System Requirements and to develop processes to verify System Configuration.
- Learned how to fly remote control airplane (80 wingspan) using a combination of flight simulation and real world experience.
- Conducted test flight to verify System Configuration and System Requirements.

*Intern, ,* — Summer 2008

- Designed and document procedures for equipment Engineering Test & Evaluation.
- Designed and implement multiple boot procedures for Single Board Computer Acceptance Test Procedure, including PXE booting over 802.11g.
- Planned vibration testing for console computer.

*Intern, Hardware,* — Summer 2007

- Translated vendor data to electrical and mechanical Interface Control Diagrams.
- Managed selection of console computer peripheral equipment: keyboard, pointing device, flash memory device.

*Intern, Hardware,* — Summer 2006

- Learned Java. Designed and wrote Java-based maintenance application for using standard design practices including Agile, version control system, and process flow diagrams.
- Built-up hardware configurations for Software Development Environment engineering testing.

**Intern, Store Information Systems, Nordstrom** — Summer 2005

- Coordinated training and deployment of in-house Point-of-Sale System.

## Extracurricular Activities

**University Presbyterian Church** — 2000 - Present

- Various leader/teacher positions for Elementary through High School Students — 2000 - 2008
- High School Sponsor — September 2009 - Present: Help wrangle youth students at church, lead Bible Study group, supervise events.
- Haiti Mission Trip — 8 January - 22 January, 2010: Diagnosed malfunctioning water pump and controller, updated and expanded electrical system from generator to small office building, began foundation on new school building. Remained calm, cool, and collected during earthquake and events following to safely leave Haiti.
- Haiti Mission Trip — 6 April - 16 April, 2011: Helped local Haitian community finish foundation. Consulted on electrical issues with photovoltaic power system. Photo and video documented various projects in work.

**Seattle Academy of Arts and Sciences** — 2009 - Present

- Alumni Board Member: Work with other board members to increase and enhance alumni involvement in alumni activities, provide opportunities for alumni to network with current students, teachers and fellow alumni, and help raise funds for the school.
- Robotics Mentor: Work with science and math teachers to design and implement a revamped robotics course.

**Institute of Electrical and Electronics Engineers** — 2007 - Present

- Member of IEEE in good standing.