

Objective

Seeking to join a company with a dynamic work environment that will allow me to pursue my love of designing and building mechanical, software and electrical systems. Interests include probabilistic robotics, computer-aided mechanical design, and embedded systems.

Education

- M.S. Computer Science (Intelligent Robotics)** – GPA n/a (first semester in progress) Expected Fall 2012
University of Southern California (USC)
- B.S. Aerospace Engineering, minor in Computer Science** – GPA 3.39 AE, 3.91 CS May 2011
University of Southern California (USC)

Experience

- Space Exploration Technologies** – Avionics Intern April 2011 - present
- Designed and built a hardware / software solution to emulate Dragon during joint NASA simulations
 - Assembled and improved a Dragon hardware-in-the-loop test rack, wrote the procedure for conducting Dragon C2 HITL tests
- Advanced Tactics, Inc** – R/D Engineer January 2011 - March 2011
- Designing small scale technology demonstrators (advanced RC rotorcraft, aircraft) under a grant from the Marines
 - Developing a standardized long range (60mi), line-of-sight comm package for realtime video and telemetry for all of our vehicles
- USC AeroDesign Team** – Performance Captain Spring 2009 - Spring 2011
- Created a multidisciplinary design optimizer in MATLAB to spec out the competition plane as Performance Captain
 - Gained workshop experience by building plane parts from composite materials for Design/Build/Fly competition
- USC Aerial Robotics Team** – Software Team Lead Fall 2009 - Fall 2010
- Outlined a distributed multi-agent solution for autonomous indoor navigation and lead a team to implement it
 - Created a Simultaneous Localization And Mapping (SLAM) algorithm for quad-rotor helicopters
- Raytheon** – Quality Engineer Summer 2009
- Interned in the Quality organization with Mission Assurance to audit labs against engineering command media
 - Coded VBA macros in Excel to provide trend analysis of non-conformances in Space and Airborne Systems programs
- Illumin** – Web Developer Spring 2008 - Fall 2011
- Designed and currently implementing a Content Management System from scratch using PHP and MySQL
 - Maintained Apache, MySQL, Subversion, and WebDAV daemons on an in-house FreeBSD server
- Other Experience:** Flash Avenue – Web Developer, OneGeek – Computer Repair Technician, USC Underwater Robotics Team – Software Team Member, TruthDig.com – Web Consultant, Advanced Tactics, Inc – Technology Consultant
- Other Projects:** Structural health monitoring via custom accelerometer chips with realtime serial communication to a LabVIEW GUI, Autonomous RC UAV (EasyStar), RC Hovercraft, Personal website: <http://javconcepts.com/>, Laser-cut LED display, Web developer for about 10 clients, Built personal computers for about 20 clients

Skills

- Engineering: MATLAB, Simulink, SolidWorks (Certified Associate), LabVIEW, NX, E3, Solid Edge, MultiSim, ModelSim SE, Xilinx
- Computer Science: C++, Java, junit (unit testing), SVN, Python, BASIC, ROS (Robotic Operating System)
- Web Development: PHP, MySQL, HTML, XML, CSS, Javascript, jQuery, Firebug, Adobe Photoshop

Honors / Awards

- 2nd place - AIAA Student Design/Build/Fly Competition (w/ AeroDesign Team) Spring 2011
- Interactive Media Awards 2010 - Outstanding Achievement: Science/Technology (w/ Illumin) Fall 2010
- “Bridging the Gap” award from the Society of Women Engineers Spring 2010
- California Space Grant Consortium UROP Research Scholarship Spring 2010
- USC Viterbi School of Engineering Dean's List Spring 2009 - Fall 2011
- USC Viterbi School of Engineering Stillman Scholarship Fall 2009 - Spring 2011
- Most Useful Award at the Google 24 Hour Programming Challenge at USC February 2008
- Dallastown Area High School Dollars for Scholars Scholarship Spring 2007