

MICHAEL J. HANNA

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PROFILE

Software engineer interested in returning to Houston area, with 9 years of experience in Modeling and Simulation, scripting, data analysis and visualization, and technical communication.

KEY QUALIFICATIONS

Languages:	C++, Python, Java, MATLAB, JavaScript, PHP
Mark-up:	HTML, CSS, XML (XSD, XPath, XSLT), reStructuredText
Libraries:	STL, Boost, Irrlicht, Selenium, Panda3D, Jinja2, Flask, jQuery, Bootstrap
Tools:	Mercurial, Git, ClearCase, Subversion, TFS, Visual Studio, Redmine, Waf, SCons, Regex, Sphinx
Software Practices:	Agile principles, Kanban, OOAD, UML, TDD
Clearance:	Active DoD security clearance

EXPERIENCE

The Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Software Engineer

February 2005 - Present

- Led team of six developers to design, build, and maintain a C++, Monte Carlo, Air and Missile Defense simulation.
- Architected and implemented key simulation capabilities, including Aegis and SSDS combat system logic, a dynamic anti-ship cruise missile model, and an integrated scene graph, to support over 50 critical DoD analyses.
- Developed Python scripts to execute simulation on compute grid, increasing analysis throughput by factor of 60.
- Proposed and adopted regression test framework with nightly builds, greatly enhancing responsiveness and quality of software.

Combat Systems Analyst

February 2005 - Present

- Conducted and briefed over one dozen critical combat systems analyses, including a 2007 assessment that ultimately led to new U.S. Navy ship self defense requirements.
- Performed requirements analysis of future variant of Evolved Seasparrow Missile (ESSM) and briefed results at the 90th NATO Seasparrow Project Steering Committee (NSPSC) meeting in Fremantle, Australia to 12-nation international consortium.
- Assessed capabilities and limitations of five SSDS ships and provided pre-deployment briefings.

Combat Systems Modeling and Simulation Section Supervisor

December 2012 - Present

- Developed task plans and coordinated with program management to secure funding and tasking for five direct reports.
- Coached staff to develop annual objectives and long-term goals, and regularly provided feedback and guidance.
- Rated staff against seven critical success factors and conducted annual performance appraisal meetings.
- Led department mentoring program and initiated recruiting activities that increased participation by 89% over previous year.

MESA Cyber Challenge Lead (Volunteer)

June 2011 - Present

- Developed first high school cyber challenge for the Maryland Mathematics, Engineering, Science Achievement (MESA) program.
- Implemented *Cyber Robot* engine that students used to write code, develop algorithms and solve cryptography puzzles.
- Spent over 500 volunteer hours brainstorming, building challenge engine, training educators, and supporting competitions.
- Over 150 students from 20 Maryland high schools have participated in the cyber challenge over the past 3 years.

University of Maryland, School of Pharmacy, Baltimore, MD

Data Migration Consultant

May 2013 - January 2014

- Developed software tool to automate data transfer to new electronic health record.
- Extracted, verified, and securly transferred over 850 patient health records into new system.

EDUCATION

The Johns Hopkins University, Baltimore, MD

May 2008

Master of Science in Computer Science

Texas A&M University, College Station, TX

December 2004

Bachelor of Science in Computer Engineering

Minor in Mathematics

HONORS AND AWARDS

- Placed 1st in TopCoder algorithm development contest held at 2008 Software Development Best Practices conference.
- Placed 3rd in 2008 IEEE Visualization Design Contest, displaying Multifield 3D Scalar Data.