
RYAN MORGAN

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INTRODUCTION

An accomplished and experienced C/C++ software developer and all-things-computer super geek, I am seeking the next chapter in my career. I have spent much of my career in the defense industry, and have a solid background developing software for military applications in support of those defending our freedom. That said, my personal interests are broad and wide, and as such I'm open to opportunities of all varieties. A strong supporter of open-source development, I very much enjoy working in a Linux environment with open and standardized tools and technologies. I have worked on projects large and small, and would fit well in just about any environment. I am friendly and personable, and have excellent communication skills, which can be rare in engineering disciplines. Well-known amongst colleagues as the go-to guy whenever problems arise, I am well-versed in all things computer; there's rarely a topic with which I'm not at least somewhat familiar. Programmer, developer, engineer, administrator, tester... I've worn all these hats. Attention to detail is one of my strong points, and you'll always know when I've touched code, because my verbose comments will never leave you guessing.

Please note: I am willing to consider contract employment, however my preference is a full-time permanent position with an organization offering long-term stability and to whom I can become a valued asset for years to come. Further, my residence is in Baltimore, Maryland (21236), so I am only able to consider opportunities located within a reasonable commute from my home, or those allowing remote/telework. Occasional travel is acceptable, however relocation is not an option.

EDUCATION

Master of Science Computer Science Johns Hopkins University 2007 Baltimore, MD

Bachelor of Science Computer Science University of Maryland Baltimore County 2001 Baltimore, MD

Professional Certifications CompTIA Security+ (2014) • EC-Council Certified Ethical Hacker (2014)

PROFESSIONAL EXPERIENCE

Secure Mission Solutions (US Army Research Lab) Sr. Software Engineer Aberdeen, MD 2014 – current

C++ software developer (contractor) supporting the US Army Research Laboratory (ARL), Computational and Information Sciences Directorate (CISD) in their role as Computer Network Defense Service Provider (CNDSP) for various government agencies and clients.

- Primary developer/maintainer of a collection of tools designed to monitor network traffic and identify potentially malicious communications or network intrusion attempts.
- Development on Red Hat Enterprise Linux platform.
- Re-engineered older C code that was poorly and haphazardly written. Updated to use GNU autotools, C++ compiler, and fully documented the code throughout, making it significantly easier for others to understand and maintain.
- Possess **active security clearance** at the **TOP SECRET** level.

Booz Allen Hamilton (US Army CERDEC) Sr. Software Engineer Aberdeen, MD 2012 – 2014

Software developer (contractor) supporting the research, development (C/C++), implementation and testing of Mobile Ad hoc Networking (MANET) protocols, as well as over-the-air management of MANETs via the Simple Network Management Protocol (SNMP).

- Developed an implementation of the Neighborhood Discovery Protocol (NHDP, RFC 6130) in coordination with the Naval Research Laboratory and the Internet Engineering Task Force; our software is to be released to the public as open source.
- Developed the SNMP interface (using open-source toolkits Net-SNMP and Agent++) to permit remote management of the protocol.
- Wrote, coordinated, and executed several real-world outdoor field testing events to measure range, throughput, reliability, and performance of our MANET protocols and the underlying 802.11 physical layer connection.
- Wrote test case documents and field-test summary reports with open source documentation and authoring tools, such as Gnuplot, L^AT_EX, LibreOffice/OpenOffice, Inkscape and Gimp.
- Built and maintained an Ubuntu Linux server hosting Git software repositories, Wiki for collaboration and tutorials, BugZilla for issue-tracking, and XMPP for real-time chat.

Red Hat Sr. Consultant McLean, VA 2012 – 2012

Technical consultant providing on-site support for clients developing web-based applications.

- Worked on-location at client site to support design, development and testing of web service components.
- Aided the promotion and successful adoption of Red Hat Enterprise Linux as the platform of choice for testing, development and final deployment.

General Dynamics Robotic Systems Sr. Software Engineer Westminster, MD 2008 – 2012

C++ developer for the U.S. Army's Autonomous Navigation System, providing unmanned, autonomous capabilities to ground vehicles.

- Worked with large (10+ person) team developing a network-distributed (via UDP) Red Hat Enterprise Linux-based application, interfacing with multiple vehicle perception and navigation sensors, as well as numerous other vehicle and FCS components.
- Developed Wireshark dissector for parsing proprietary network protocol into human-readable form, along with tool to auto-generate the dissector C source code following interface changes.
- Developed software module to correct vehicle navigation errors, using a proxy class to hide proprietary implementation details in a separate compiled library and exposing only enough public interface methods as necessary.
- Encouraged and promoted the use of industry standard software development processes and procedures, as well as tried-and-true open source development tools to increase productivity while keeping licensing costs to a minimum.

Aerotek (Interface & Control Systems, Inc.) Software Engineer Columbia, MD 2007 – 2008

Software Engineer specializing in real-time command and control software for satellites, control centers, test sets and ground stations.

- Developed functional, schedule-friendly and cost-effective solutions to overcome limitations of the Spacecraft Command Language and deficiencies in existing code.
- Worked in a heavily command-line-oriented atmosphere where environment variables played a key role in system configuration and correct application operation. Utilized a very detailed and complex make system, with multi-layered makefiles for both Win32 and embedded (VxWorks) targets.

Lockheed Martin, MS2 Software Engineer Baltimore, MD 2002 – 2007

Real-time embedded software engineer responsible for maintenance, bug fixes, and new development and integration of VxWorks-based GPS integrator for MK-41 Vertical Launching System.

- Developed driver for custom-built Fiber-Optic Transmitter that was responsible for encoding and transferring large blocks of data across VME bus along very specific byte- and word-sized boundaries.
- Investigated many System Anomaly Reports and implemented corrective actions often involving complex changes to system functionality, interprocess-communication, task prioritization, modifications to process stack sizes, and BSP modifications.

TECHNICAL COMPETENCIES

C / C++ GNU toolchain (gcc / g++ / gdb) Cygwin MinGW
make / makefiles / scons Linux (Ubuntu / Red Hat) Gnuplot LaTeX
Git hg / Mercurial svn / Subversion WxWidgets
TCP/IP UDP FTP SNMP SSH Wireshark
Perl Python bash shell scripting
HTML / CSS / JavaScript Virtualization (VirtualBox / VMWare)