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## EDUCATION & TRAINING

- **M.S. Software Engineering**. 08/2014. West Virginia University
  - Thesis: *Development and Resultant Implementation of Custom Software for Analyses of Galactic Neighborhoods*. http://www.mdmoore.me/?p=thesis
- **B. S. Computer and Information Sciences** *cum laude*. 05/2005. Shepherd University.
- **Jefferson High School**. 05/2001. Jefferson County, West Virginia

- **SQL Server High Availability**. 02/2010. Learning Tree
- **SQL Server Reporting Services**. 02/2010. Learning Tree
- **SQL Server Database Administration**. 09/2010. Learning Tree
- **ASP.Net Bootcamp 3.5/C#**. 05/2008. New Tech. Solutions, North Haven, CT

## SECURITY CLEARANCE
- Secret - U. S. Coast Guard

## SKILLSET
- C# / .NET Framework 3.5/4.0/4.5, LINQ, ASP .NET,  Classic ASP
- JQuery / JQuery Mobile / JQuery UI / JSON / AJAX / KML / GeoRSS
- JMS (Fiorano & Apache AMQ) / Google Earth / ArcGIS Explorer / Google Maps
- HTML5 / CSS3 /  JavaScript / Regular Expressions / XML & XSLT
- SQL Server 2000 - 2014; TSQL; PL/SQL
- Linux (Fedora / Red Hat, Ubuntu) / Apache / MySQL / PHP / PERL
- Microsoft Office / Microsoft Windows (95 - 8.1)  / Mac OS X

## EXPERIENCE

**January 2014 – Present** *Principal Database Analyst, USCG Operations Systems Center, Kearneysville, WV*
*Contract Company: General Dynamics Information Technology*
*Self Locating Data Marker Buoy team*

- SLDMB increased budget to bring me back 100%.
- Lead working group to update organization's DBA SOP and DB Documentation Standards templates, including structure and recommended content. Feedback from customer: "nice standardization with examples" and "very thorough to make the DB think … nice!"

- Developed and released SLDMB 3.0 using HTML5/CSS3 to support newer Internet Explorer version on the USCG Standard Image. This version utilizes a single-page UI and represents (through a newer standard browser and refactoring) a noticeable performance increase for users.
- Used SQL Server Spatial to determine if a buoy has traveled through an Area of Responsibility (AOR) Polygon.
- Planned and implemented code changes for migration off the Fiorano JMS product to Apache Active MQ.
- Planned and implemented migration to Windows 2012 and SQL Server 2012.
- Support Project Control Specialist (PCS) by providing WBS for project plans.

**July 2013 – January 2014** *Principal Database Analyst, USCG Operations Systems Center, Kearneysville, WV*
*Contract Company: General Dynamics Information Technology*
*Self Locating Data Marker Buoy and Alert and Warning System teams*

- Transitioned off EDS onto the AWS team which is used by USCG and other DHS components for notifications and roll-calls in the event of emergencies and other events.
- Updated XSLT used to import data into AWS in the format required
- Collaborated with the USCG and Icelandic Coast Guard to share SLDMB data during a multi-national Search and Rescue Exercise (SAREX) in the Arctic.

**October 2011 – July 2013** *Principal Database Analyst, USCG Operations Systems Center, Kearneysville, WV*
*Contract Company: General Dynamics Information Technology*
*Environmental Data Server and Self Locating Data Marker Buoy teams*

- Rebuilt and configured SQL Server 2008 R2 database servers on Windows 2008 Standard.
- Enabled database backup compression (previously unavailable on Standard edition of SQL Server until 2008 R2) resulting in a $7,000 annual savings for nightly backup costs for storage and transfer costs.
- Implemented audit log backups for Windows Event Logs, SLDMB services, and IIS. Logs are pushed to a central server for backup. This reduced the licensing costs for Netbackup on the non-database servers resulting in approximately $1,000 a year saved.
- Added audit log compression using 7zip with best compression method resulting in a 93% compression ratio for storage and transfer of the files to tape.
- Released rewrite of SLDMB application as version 2.0 in Feb 2012. Since then released six 2.x versions through DEC 2012. All of this done as the only application engineer/database analyst on the team. This application is built entirely with REST web services that are run through the SOA ESB and XML Gateways. The architecture allows for easy creation of new services by creating new stored procedures. Also there are serializes for XML, JSON, KML, GeoRSS, and plaintext: any stored procedure can be provided in any of the supported

data formats via a simple configuration change. The rewritten application received overwhelming positive feedback over the previous system. Field users described the new system's ease of use as a "total no-brainer"

- Built a new data collection service for SLDMB which uses a SPEAR to SOAP proxy on the ESB to collect new SLDMB buoy data. This change allowed the SLDMB program to stop direct data delivery via email, resulting in approximately <u>$10,000 in annual savings.</u>
- One release of SLDMB included enhanced versions of reports previously implemented in SQL Reporting Services. This allowed the SLDMB program to avoid purchasing/renewing for two SQL Server licenses, <u>saving approximately an initial $10,000 as well as the out-year costs for software license renewals.</u>

**June 2010 – October 2011** *Senior Database Analyst, USCG Operations Systems Center, Kearneysville, WV*
*General Dynamics Information Technology Environmental Data Server and Self Locating Data Marker Buoy*

- Only Database Administrator and Application Engineer on two critical search and rescue systems. Data from these systems are used to plan the most optimal search pattern to quickly find and rescue persons missing offshore. The data was also used to monitor and predict the flow of oil during the Deepwater Horizon cleanup.
- Provided data sharing services for NOAA in support of Deepwater Horizon
- Provided data sharing services for the National Data Buoy Center (NDBC)
- Rewrote significant portions of legacy SLDMB system utilizing SOA concepts and dynamic serialization of data to JSON, XML, KML, CSV, and GeoRSS. This provided for easy scalability and extremely high availability and performance.
- Provided input & reviewed requirements for next generation buoys.
- Designed and implemented algorithms (C#) to detect and clear flawed GPS data points.
- Designed and implemented UI using Google Maps to display buoy tracks and visualize flawed GPS points for review and cleanup
- Reviewed and recommend licensing strategies for most effective use of available funding.
- Reviewed resumes and recommended candidates for summer internship program.
- Provided technical recommendations during interview process for teams hiring DBAs and programmers where the team did not have senior technical staff.

**August 2009 – June 2010** *Database Administrator II, USCG Operations Systems Center, Kearneysville, WV*
*Dell Perot Systems - Environmental Data Server and Self Locating Data Marker Buoy*

- Rewrote mission critical SLDMB data processing system utilizing the USCG Service Oriented Architecture in C#
  - Cut delay in data from buoys in the field to 10 minutes, down from 60.
  - Capable of processing 24 hours of data in less than 30 seconds, down from hours for the legacy system.
- Migrated SLDMB from SQL Server 2005 to SQL Server 2008.
- Migrated SLDMB from conventional servers to Virtual Machines (VMWare)
- Designed new system architecture for SLDMB utilizing database mirroring, log shipping, and switch load balancing to improve reliability and provide for automated failover and remote disaster recovery.
- Implemented improved file cleanup system for EDS utilizing XML for easy configuration, and C# for the executable.
- Implemented system monitoring service using C#, as the enterprise monitoring system is not available at DR for us to use, designed to be configurable for other teams to use down the road.
- Implemented a C# log watching service to page the system duty analysts immediately when certain security events occur (ex. user account creation).
- Provided technical recommendations during interview process for teams hiring DBAs and programmers where the team did not have senior technical staff.


**Sept 2006 – August 2009 – *Application Programmer II, USCG Operations Systems Center, Kearneysville, WV***
*Dell Perot Systems - Application Support Group*

- Took on a lead developer/mentor role for the other developers. This meant leading/mentoring other full time developers and intern/co-op students (from two to four other individuals).
- Duties included setting strong coding, design, and configuration management standards for all development work on the team.
- Responsible for design of all database schemas and structures for all of my applications. This included the tables, views, stored procedures, constraints (foreign key, unique, check, etc), fill factors, indexes, naming standard, rollouts, merging the work of others into the final DB release script used to move releases to production.
- Took a lead role in migrating upwards of 15 various legacy Classic ASP applications to ASP .NET (C#)/SQL Server on a standardized platform, library, and appearance. This permitted faster turnaround time on enhancement requests and bug fixes, as well as the reuse of stable, proven code and overall a better product for the customer.
- Responsible for quickly and effectively generating ad-hoc reports from the database for data calls for Coast Guard Headquarters (for example, number and type of servers managed, what operating system they run, etc).
- Took a role in resolving numerous issues with the database servers (failover backup/restore failures) when the team's DBA was out or needed a hand.

**May 2005 – Sept 2006 –** *Application Programmer I, USCG Operations Systems Center, Kearneysville, WV*
*QSS Group Inc - Application Support Group*

- Continued maintenance and enhancement on ClearQuest and rest of Rational suite.
- Developer on a team responsible for creating the Asset Tracking and Organizational Management application (ATOM) to track government property as well as the configuration of business systems and costs associated with the systems.
- Worked to develop a documented requirements gathering and application development plan based on the ATM experience.
- Stood up XMPP IM server and developed account management tools for facility running on LAMP.
- Developed and maintained various web applications using SQL Server and ASP/JavaScript.
- Responsible for database design and maintenance on my projects.
- Worked with customer stakeholders to determine requirements.


**February 2004 – May 2005 –** *Application Programmer (Intern), USCG Operations Systems Center, Kearneysville, WV*
 *QSS Group Inc. - Application Support Group*

- Though Rational support stated it was "impossible" I successfully migrated all data from previous ClearQuest schema, with no lost data and correct ID numbers using an automated combination of Rational Robot scripts, PERL scripts, and SQL scripts
- Assisted with selection, installation, and configuration of the first blade servers in the facility.
- Developed and maintained various miscellaneous web applications using SQL Server and ASP/JavaScript.
- Lead developer on rewrite of CM database used to track property in the facility.
- Responsible for database design and maintenance on my projects.
- Worked with customer stakeholders to determine requirements.

**August 2003 – February 2004 –** *Application Programmer (Intern), USCG Operations Systems Center, Kearneysville, WV*
*QSS Group Inc. - CGCentral*

- Worked primarily on CGTalk, the enterprise wide instant messaging application for the Coast Guard, which used Oracle and MySQL databases and the XMPP protocol.


**May 2003 – August 2003 –** *Application Programmer (Intern), USCG Operations Systems Center, Kearneysville, WV*

*QSS Group Inc. - Configuration Management Summer Intern*

- Integration of Rational ClearQuest and Remedy ARS proof of concept using PERL, VBScript, and Email methods. (Rational technical representatives had previously stated that this was not possible).
- Other Miscellaneous web-based database apps using SQL Server and ASP/JavaScript.

**September 2001- May 2003 – *User Support Desk, Shepherd University, Shepherdstown, WV***
*Help Desk Technician*

- Work on network installations; troubleshoot user problems with MS Office, Banner, various networking issues, Install and set up user computers.
- Ran network and phone lines; terminated RJ-45 and RJ-11/12 jacks; made Cat5 patch cables; installed 3com switches and hubs;

**<u>PROFESSIONAL REFERENCES</u>**

- On Request