Thomas W. Gardner, II

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Summary

Former U.S. Navy nuclear submarine officer with staff experience and data analytics consultant. Current DoD/USAF operations analyst. Seeking opportunities to apply a passion for data management, analytics, and visualization to important, complex, and challenging real-world problems.

- DoD TS/SCI Clearance
- Cloud Computing
- Experienced Staff Officer
- Linux Administration
- Data/Knowledge Management
- Continuous Learner

Education

The George Washington University, School of Business — Washington, D.C.
Master of Business Administration - Finance Concentration, Data Analytics Certificate — *May 2015*
–Academic Excellence Award (highest GPA), E. William Hahn Award (excellence in data analytics)

Virginia Polytechnic University and State University (Virginia Tech), School of Engineering — Blacksburg, VA
B.S. in Chemical Engineering — *May 2005*
–Member: American Institute of Chemical Engineers, $A X \Sigma$ Chemistry Honor Fraternity, Virginia Tech Club Baseball Team

Experience

Office of the Secretary of the Air Force, Studies and Analysis (SAF/SA) — Arlingtgon, VA
Operations Research Analyst — *Sep 2021 – Present*

- **Military Campaign Analysis:** Full-time support to OPNAV N81C, Campaign Analysis and Modeling Branch, Assessment Division, Office of the Chief of Naval Operations (Integration of Capabilities and Resources):

–Campaign Modeling and Simulation: Conduct Synthetic Theater Operations Research Model (STORM) modeling for OPNAV N81C by working with Navy and Joint Force planners to implement planning documents and Concepts of Operations (CONOPS) as STORM code, balancing factors such as minimizing model run-time and resulting database disk size while maintaining sufficient granularity in model results to address questions of campaign effectiveness.

–Simulation Results Analysis: Development and maintenance of the STORM Analyst Reporting Aid (SARA), a proprietary STORM post-processing suite that uses Python, R, and Structured Query Language (SQL) to query STORM results databases, clean and wrangle simulation results data, and output a consistent and growing set of hundreds of data visualizations and tables preformatted for inclusion in briefing materials and reports. Technical writing of reports and briefs, which leverage SARA outputs, to communicate campaign simulation results, often comparing excursions of interest to baseline runs.

–Ad Hoc Staff Support: As a maintainer of N81's campaign model, I field many varied requests for information from N81 personnel supporting lower-level studies, such as mission- and engineering-level modeling, who request details of the campaign-level model to ensure their studies nest effectively. Additionally, I develop and maintain various small tools for parsing STORM input files, communicating STORM results via dashboards, etc.

Metron Scientific Solutions, Inc — Reston, VA
Senior Campaign Analyst — *May 2020 – Sep 2021*

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Summit Consulting, LLC   **Washington, D.C.**
Senior Consultant   *June 2015 – April 2020*

- **Data Science and Innovation:** As a member of the Data Science Team, involved in multiple projects across Summit's competencies in an internal consulting role identifying technologies, methodologies, and processes to achieve project success:

    –U.S. Federal Housing Administration (FHA): developer on the cloud platform used to analyze mortgage data and develop cash flow estimates for FHA's annual budget. The platform leverages many Amazon Web Services features, along with the R, RStudio, and Shiny statistical data analysis environment, a SAS Studio development environment, and the Looker business intelligence software, to provide a range of data analysis services to agency leaders and analysts.

    –Residential Housing Automated Valuation Model: conducts complex valuation modeling in support of large, complex litigation involving residential mortgage-backed securities. This modeling involves large amounts of data, sophisticated statistical methods, and cloud computing leveraging cutting-edge technologies.

    –Staff Technology Training and Integration: Increased general adoption of coding and work flow best practices by training dozens of staff members across at least 6 teams in R programming and git/GitLab version control and project management tools.

- **Web Development:** Played an integral role in transitioning Summit's analyses from static, written reports to interactive, browser-based applications:

    –Pioneered Summit's first client-facing R Shiny applications for the U.S. Department of the Treasury. These allowed for the client to interface with their data through "What If" analysis, interactive mapping, and export of the underlying data.

    –When the required sophistication of web applications began to outgrow the capabilities of R Shiny, led a small team in developing an in-house full-stack web development capability, focusing on a `Node`, `Express`, `React`, and `PostgreSQL` stack. This team proved the concept during an engagement with Kaiser Permanente in which we developed an Executive Dashboard Application to track investments in their $200M Thriving Communities Fund.

- **Leadership and Project Management:** Engagement lead for multiple federal contracts, leading teams in the conduct of work in accordance with the Performance Work Statement (PWS), reporting directly to the Contracting Officer Representative (COR):

    –Lead a team overhauling business processes for various offices of the Department of the Treasury's Community Development Financial Institutions (CDFI) Fund. Analyzed existing processes and policies, proposed improvements, and implemented approved changes. Most often, these implementations took the form of new or improved data collection requirements, financial models, and interactive R Shiny applications.

    –Led a team conducting compliance research for the CDFI Fund's New Markets Tax Credit (NMTC) Program. This consisted of designing and drawing a stratified random sample of NMTC projects, designing protocols for desk reviews of selected projects, and analyzing audit artifacts and administrative data to test for programmatic compliance and address the research interests of the CDFI Fund. Research topics included the depth and breadth of public subsidy required to attract capital to low-income communities, the effects of highly complex NMTC financial structures on project outcomes, and factors associated with project failure.

    –Supported the CDFI Fund's Bond Guarantee Program (BGP), participating in the 2015 Bond Round which resulted in $327M in funding for low-income communities: Performed financial underwriting using CAMELS methodology, maintained a logistic regression risk rating model, and developed presentations for the BGP Credit Review Board. Performed complex calculations to estimate federal credit subsidy using a cash flow model implemented in Stata and The Office of Management and Budget's Credit Subsidy Calculator 2 (CSC2).

Special Operations Command Forward - North and West Africa   **Baumholder, Germany**
J5 Plans Director   *June 2017 – November 2017*

- Led long-term planning for the Command including initiatives involving the Baumholder headquarters staff and various forces spread across the African continent. Produced Commander's Update Briefs and Commander's Decision Briefs, tailored specifically to convey actionable information to Command Leadership.
- Evaluated and monitored Security Cooperation programs under execution by assigned forces. Command representative to the Special Operations Command, Africa, (SOCAF) Building Partner Capacity Working Group.

J8 Resource Management Officer   *November 2017 – May 2018*

- Oversaw Command budget execution in accordance with the spend plan and the Commander's guidance and intent.
- Developed tools and processes to evaluate spending, facilitate spend plan development, and forecast budget short falls.

U.S. Navy Reserves, Undersea Warfare Operations DET DC and DET CTF-84   **Washington, D.C.**
Submarine Warfare Officer   *June 2013 – Present*

- As Theater ASW Watch Captain, led teams of up to 8 personnel in the execution of Anti-Submarine Warfare operations in the European and African theaters, including implementing complex Operations Orders, drafting operational message traffic, and producing briefing products for senior commanders.
- Executed monthly operational reporting for a unit of 34 Naval officers to inform superior commands of operational support to the Active Component, readiness, and qualifications. Instituted innovative procedures to streamline data collection, ensuring accurate reporting with minimal burden on Navy Reserve officers outside monthly drill periods.
- Diligently and meticulously managed pay and administrative issues, often finding and correcting discrepancies before the affected

person noticed them.

U.S. Naval Forces, Europe and Africa, U.S. SIXTH Fleet   **Naples, Italy**
Maritime Operations Center Division Officer/Deputy Director   *May 2010 – April 2013*
• Created and maintained over 20 procedures for timely and accurate reporting of critical information to executive-level decision makers, contributing to the success of over 30 Navy operations and exercises in Europe and Africa.
• As one of two knowledge managers, maintained the N33 Current Operations SharePoint page to maximize the dissemination of information across the staff and to superior and subordinate commands.
• Increased qualified operators by 45% in one year by implementing a shift qualification and training program for over 150 Navy Chiefs and Officers.
• Led a division of 40 enlisted Sailors in the operation and integration of various command and control information systems used to track Naval forces throughout Europe and Africa.
• Conducted operations briefings for senior level leadership, including Admirals, Generals, and Senior Executive Service personnel. One of only seven out of 100 junior officers hand-selected for this role.

USS OKLAHOMA CITY (SSN 723)   **Norfolk, VA**
Assistant Engineer Officer   *November 2009 – April 2010*
• Directed work procedures and safety drills and developed training as second-in-charge of a 60-man department of engineering technicians responsible for the operation of a Naval nuclear propulsion plant leading to the ship passing a reactor safeguards examination allowing the reactor to be started-up after 24 months of shutdown maintenance.
Chemistry and Radiological Controls Assistant/Reactor Controls Assistant   *November 2007 – November 2009*
• Set and maintained policy for all aspects of radiological and water chemistry controls involved with the reactor and steam plant ensuring compliance with strict Navy and U.S. government standards.
• Developed and maintained a comprehensive audit program to improve divisional maintenance and administration that was successful in reducing recurring deficiencies.
• Led division through several rare and complex procedures associated with a complete overhaul of reactor control instrumentation, resulting in the successful initial alignment of critical reactor sensors.

Skills and Distinctions

Skills:	*Basic:*	LaTeX, Stata, SAS
	Intermediate:	SQL, d3.js, Ansible, Packer, Amazon Web Services
	Advanced:	R (including Shiny), Python, JavaScript, Git, VBA, Linux Administration
		Synthetic Theater Operations Research Model (STORM), Advanced Framework for
		Simulation, Integration, and Modeling (AFSIM)
Certifications:	–Certified Prospective Nuclear Engineer Officer by U.S. Navy and Department of Energy	
	–Amazon Web Services, Certified Cloud Practitioner, 2020	
Awards:	Meritorious Service Medal, Joint Commendation Medal, 3 x U.S. Navy Commendation Medal, 3 x U.S. Navy	
	Achievement Medal, Army Achievement Medal	