Jack Allan Bowden

of Virginia, U.S.A.

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Civil Service Resume

EDUCATION

University of Virginia   Charlottesville, VA
Master of Science: Management of Information Technology   August 2024

> Relevant courses:
> Advanced Enterprise Architecture, Strategic IT Management, IT Product
> Management, IT Project Management, IT International Project Management,
> Innovation and Technology Management, IT-Driven Organizational
> Transformation, Digital Innovation.

William & Mary   Williamsburg, VA
Bachelor of Science: Computer Science   May 2019

> Relevant courses:
> Data Structures, Discrete Structures, Software Development, Competitive
> Programming, Algorithms, Computer Organization, Programming Languages,
> Entrepreneurship, Finite Automata, Game Design, Computer Animation,
> Systems Security.

Virginia Peninsula Community College   Hampton, VA
Associate of Science: Social Science   August 2016

EXPERIENCE

GOVERNMENT OF THE UNITED STATES:

Federal Maritime Commission   Washington, DC
Office of Information Technology   Jan 2025 - present
Chief Data Officer. Information Technology Specialist.
General Schedule, Grade 14, Series 2210, 40 hours per week. In-office.

- Assigned as the Chief Data Officer, Office of Information Technology, I develop
  and implement the agency's comprehensive data strategy, ensuring alignment
  with organizational goals and federal mandates.

- Oversee the design and execution of advanced data architectures, including data
  lakes and lakehouses, to enable efficient storage, processing, and analytics.

- Establish and enforce robust data governance frameworks, including policies for data quality, metadata management, and compliance with data privacy regulations.

- Collaborate with cross-functional teams and senior leadership to identify strategic opportunities for leveraging data to improve operational efficiency and achieve regulatory objectives.

- Lead enterprise-wide data integration initiatives, ensuring seamless interoperability between systems and platforms.

- Drive the adoption of emerging technologies, such as machine learning and advanced analytics, to enhance insights and improve decision-making.

- Monitor and report on data management performance metrics, ensuring transparency and accountability to regulatory authorities and stakeholders.

- Promote a culture of data literacy and continuous improvement by providing training and fostering collaboration across teams.

Bureau of Trade Analysis   Jan 2024 – Jan 2025
Data Architect. Computer Scientist.
General Schedule, Grade 14, Series 1550, 40 hours per week. Hybrid.

- Assigned as the Data Architect, Bureau of Trade Analysis, I collaborated with stakeholders to understand data requirements, define data models, establish data standards, metadata definitions, classification schemes, and find opportunities for leveraging data assets to support strategic objectives and improve business outcomes.

- Created and maintained conceptual, logical, and physical data models to ensure data integrity, consistency, and interoperability across systems and platforms.

- Lead data integration efforts, including the design and implementation of ETL processes, data pipelines, and data warehouse/data lake.

- Defined and enforced data quality standards, data validation rules, and data cleansing procedures to ensure the accuracy and reliability of enterprise data assets

- Monitored and reported on data quality metrics, compliance status, and data management performance to senior leadership and regulatory authorities.

- Ensured compliance with data privacy regulations, data protection laws, and industry standards by implementing appropriate controls and safeguards for sensitive data.

- Deployed and managed Azure resources including Azure Databricks, Azure Data Factory, Azure Data Lake Storage, and Microsoft Purview at the enterprise level.

- Created and chaired a Data Governance Committee, in support of the Evidence Act, to address agency-wide concerns in data governance. Listened to

stakeholders, gathered requirements and guided implementations of best fit technical solutions.

- Wrote Python processes for strategic use by the agency to meet objectives.

- Setup and maintained agency-wide version control repository system.

- Established and oversaw the process of extracting, storing and organizing data that will require analytics from multiple sources to provide data-driven insights to senior leadership.

- Designed and oversaw the implementation of an agency data analytics management framework that ensures a modern and sustainable approach to integrating data science, data interoperability, data security and appropriate AI solution integration considerations in the enterprise architecture.

- Advised leadership on advanced quantitative methods, computer science and mathematical concepts that can be used to solve difficult and unknown questions across large sets of disorganized data.

- Provided critical data insights and technical governance support in managing AI use cases for generative AI and machine learning implementations.

- Oversaw the development and improvement of information management systems, programs, storage and catalog solutions to support the data gathering and analytical needs of the department while continually improving the scientific and evaluation methodologies for agency systems and programs.

Department of the Army   Fort Eustis, VA
U.S. Army Training and Doctrine Command   Jan 2021 – Jan 2024
Combined Arms Center, Army University
Office of the Vice Provost for Digital Education
The Army Distributed Learning Program
Learning Engineer. Computer Scientist.
General Schedule, Grade 13, Series 1550, 40 hours per week. Hybrid.

- Assigned as the Learning Engineer, served as an authoritative technical consultant for the Army Distributed Learning (DL) Interactive Multimedia Instruction (IMI) courseware (CW) process. Researched, analyzed, interpreted, and developed major scientific, administrative, regulatory, and policy development and processes that supported the Army Virtual Learning for the ADDIE Implementation stage of all Army DL IMI CW.

- Provided technical support and guidance to the Army Distributed Learning (DL) community with respect to developing strategies for institutional training products by publishing and maintaining the Army Business Rules and Best Practices for Distributed Learning (BRBP), an Army courseware requirements document that resulted in the reduction of courseware anomalies found during validation trials. Utilized a team approach comprised of multiple stakeholders in the discovery, resolution, and documentation of courseware problems.

- Represented the command at meeting/briefings to discuss the potential application of current and future relationship with activities to effect interchange of information and to make decisions on all actions associated testing of web-based training by reviewing and editing draft editions DoDi 1322.26 Distributed Learning and recommending actions in support of command to DoD at-large.

- Established automated courseware testing criteria to support a spiral software/courseware development and acceptance testing cycle to meet operational mission objectives, needs, and allowed configurations of various computer-controlled systems and subsystems using DISA Standards Technical Implementation Guide to meet user computing requirements.

- Identified requirements for new or modified job procedures, software tools, and hardware requirements by observing and analyzing difficulties encountered during informal/formal testing of training related software by colleagues and student courseware users through oversight of a contract team and management of a courseware ticketing and reporting system. Additionally, through maintenance of several Microsoft Access and SharePoint-based databases used by colleagues to record courseware anomalies found during testing process.

- Established automation criteria to support spiral software development and acceptance testing cycle to meet operational mission objectives, needs, and allow configuration of various computer-controlled systems and subsystems to meet user requirements in part by establishing baseline computing requirements within BRBP courseware requirements document.

- Provided training on DL courseware technical standards, design, and development of processes for DL interactive multimedia instruction courseware and other DL products across the Army to contract officer representatives, instructional technology analysts, and other persons and entities within and adjacent to DoD by way of in-person and technical demonstrations at conferences, Army schoolhouses, and elsewhere.

- Oversaw an 8-person contract support engineering team. Team was designated to diagnose, analyze, research technical standards, specifications, and proper operation of courseware technologies and products for the Army that both defended the Government's existing investments from dependent, deprecating technologies such as Internet Explorer and Adobe Flash, and researching and forging the Government's path forward in newer learning technologies and products such as artificial intelligence and 3D modeling. As the Government sponsor, approved all travel requests and submitted signed reports of contract team progress to the contract officer representative.

- Drafted and delivered performance work statements (PWS) and deliverables conformant to business expectations and best practices of the Army learning environment for contracting personnel within VPDE and at Mission Installation and Contracting Command – Fort Eustis in support of learning technology product and support procurements, task orders for multimillion-dollar contracts.

- Completed technical evaluation boards on contractor technical proposals submitted during the procurement process for learning technologies and services.

- Created and presented briefings on division processes and activities with a focus on software/courseware acceptance testing, work progress, technical issues, and new software/courseware development approaches that directly resulted in the development of new 3D models, Augmented (AR)/Virtual (VR) reality CW, and new testing processes.

- Identified, designed, and developed requirements, processes, and approaches for new or modified job procedures, software tools and utilities, and hardware requirements by observing and analyzing difficulties encountered during informal and formal testing of courseware used by colleagues and users.

- Managed, coordinated, and provided technical software/courseware development guidance and support standards, specifications, and requirements to government employees and contractors that execute the development and authoring of TADLP standards and specifications and acceptance testing software tools.

- Oversaw and mitigated discrepancies, delivered recommendations and remedial actions to assure coordination of best optimized technical objectives and approaches that are consistent in attainment of new optimal objectives and procedures that support CW development for TRADOC centers and schools.

- Forged strong partnerships at DoD, Joint, TRADOC, and other services that cultivated and integrated the mastery of courseware instructional technology architectures, standards, contracting and specification for courseware that resulted in new courseware architectures, WebGL, 3D models, cmi5, Machine Learning (ML), E-Pub, AR, VR, and the DoD ADL SCORM 2004 3rd Edition and xAPI specifications to develop Army wide administrative and regulatory policy on and process for all Army DL courseware products.

- Participated in the DoD Advanced Distributed Learning Committee (DADLC) and identified the necessity for the Army adoption of cmi5 and xAPI standards for modernized operation of courseware.

- Supported VPDE and Army University in an artificial intelligence in education initiative alongside Army Futures' DEVCOM Soldier Center and the University of Southern California to identify and propose educational technology products to be developed as applications of artificial intelligence for release to the public.

- Supported multiple multi-national training exercises including VIKING 22, a distributed computer-aided exercise and simulation powered partly by learning technologies.

NON-FEDERAL EMPLOYMENT:

Automatic Data Processing, LLC (ADP)   Norfolk, VA
Associate Application Developer.   Jul 2019 – Jan 2021
$71,500/yr. 40 hours per week.

- Served as a Site Reliability Engineer alongside an agile scrum team with full-stack computer application development skill set to monitor and maintain over 3,000 production-level, time-keeping computing infrastructure systems in support of company payroll and web-based technologies. Carried out assignments to completion with little technical review.

- Identified and implemented event-driven, automated programming solutions in Ansible, an open-source integrated development environment and systems programming language, eliminating 50% of systems operation toil across company products and freeing up company resources and availability for other needs.

- Created web-based applications that defined best practices, potential pitfalls, and other matters related to company work, seeking team excellence in software development and solutions engineering. Assumed subject matter expert responsibility for several key team offerings to bolster overall team readiness for business and client needs.

- Developed a system upgrade scheduling system to automate an otherwise manual and labor-intensive process, reducing a process of approximately seven hours to 30 minutes.

- Audited and evaluated the development and infrastructure work of colleagues for functionality, anomalies, debugging, and troubleshooting to ensure quality and consistency within the business rules and best practices.

County School Board of York County, Virginia   Yorktown, VA
Information Technology Intern.   Jul 2013 – Aug 2016
$7.25/hr. 40 hours per week.

- Designed, developed, and deployed a learning product under the guidance of the Supervisor of Computer Maintenance that allowed students and other stakeholders to wirelessly broadcast the audios and visuals of their phones, tablets, and other mobile devices onto their classroom projector screens, increasing classroom engagement and productivity.

- Planned and executed the installation and maintenance of over 4,000 computing systems across 19 public schools in support of classroom learning technologies for over 13,000 domain end-users, establishing an understanding of the computing infrastructure environment in support of learning technologies.

- Prepared and delivered presentations and briefings on division computing infrastructure and classroom learning technologies with a focus on end-user functionality, anomalies, debugging, troubleshooting, and researching.

- Provided direct support to school faculty and staff on technical problems encountered in classrooms by analyzing and understanding the instructional strategies, course objectives, training environment, computing infrastructure, critical success factors, budget constraints, critical challenges, computing needs/limitations and provided step-by-step solutions and resolutions.

- Unpacked computers and placed computers on desks, tables, carts, cabinets, or other provided furnishings, connected all computer cables, including power cords, VGA cable, network patch cord, parallel cable, mouse, etc., and removed boxes and packing materials to designated locations. Performed basic computer set-up to include installing Windows and various application software.

- Assisted in the administration and technical support of the Virginia Standards of Learning courseware testing system.

SKILLS

Data Architecture & Governance:

- Adept at constructing and refining conceptual, logical, and physical data models to ensure accuracy, consistency, and interoperability across systems.
- Experienced in leading and implementing data governance structures—such as data stewardship councils—and establishing standards that align with regulatory and security requirements.
- Proven track record of guiding data-related initiatives, enforcing data quality measures, and promoting best practices in data privacy, classification, and metadata management.

Data Engineering & Integration:

- Skilled in the full lifecycle of data engineering, including designing data lakes, warehouses, and efficient ETL/data pipeline processes that meet both operational needs and long-term analytics objectives.
- Experience deploying and managing cloud-based solutions (e.g., Azure Databricks, Azure Data Factory, and Azure Data Lake Storage) and integrating metadata management platforms like Microsoft Purview.
- Adept at using Python to streamline processes, establish version control environments, and enhance the reusability of data assets.

Advanced Analytics, AI & Machine Learning:

- Experienced in applying advanced statistical methods, computational modeling, and emerging AI/ML techniques to extract meaningful insights from large, diverse, and messy datasets.
- Skilled at advising leadership on leveraging data science, machine learning models, and generative AI solutions that inform strategic decision-making and foster innovation.

Technology & Tooling Proficiency:

- Proficient in multiple programming languages and frameworks (e.g., Python, Java, Swift, Kotlin, C++, Angular, Quasar, Express, Flask, Laravel, Spring) and comfortable with both relational (MySQL, Postgres) and NoSQL (MongoDB) databases.
- Familiar with front-end and back-end integration technologies (HTML, CSS, JavaScript, JSON, XML), and experienced in using DevOps and cloud ecosystems, including AWS, Azure, Docker, Kubernetes, Git, and command-line interfaces.
- Knowledgeable in advanced learning technology frameworks, immersive learning solutions (AR/VR), and interoperability standards (SCORM, xAPI, cmi5).

Project Leadership & Procurement Management:

- Skilled in streamlining procurement activities, optimizing vendor partnerships, and overseeing high-value contracts to achieve organizational objectives.
- Capable of managing cross-functional teams, aligning technical priorities with business goals, and ensuring all stakeholders are informed and engaged throughout the project lifecycle.

Data-Driven Culture & Communication:

- Strong ability to translate complex technical and analytical concepts into actionable insights for executive audiences.
- Committed to fostering a data-informed environment, encouraging continuous improvement, and promoting evidence-based strategies and solutions.

Productivity & Collaboration:

- Proficient in the use of Microsoft Office Suite and a variety of integrated development environments, enabling efficient documentation, presentation, and cross-team coordination.
- Effective at gathering requirements, understanding stakeholder perspectives, and guiding teams toward scalable, fit-for-purpose technical solutions.

NOTABLE CERTIFICATIONS

- Department of the Interior University:
  - Artificial Intelligence In The Federal Workplace.   December 2024
- Army Learning Management System:
  - Supervisor Development Course.   February 2023
  - Civilian Education System (CES) Supervisor 101.   February 2023
  - Action Officer Development Course.   October 2021
- Army Management Staff College:
  - Senior Training and Education Managers Course.   October 2022

- o   CES Advanced Course   May 2023
- Defense Acquisition University (DAU):
  - o   Fundamentals of Systems Acquisition Management**.**   February 2022
  - o   Intellectual Property and Data Rights.   March 2022
  - o   Fundamentals of Systems Engineering.   March 2022
  - o   Introduction to Science and Technology Management.   March 2022