

Sean Fallon

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Professional Summary

Data professional with a Master's degree in Computer Science and 6 years of experience in systems analysis, data integration, and reporting design, including 2+ years primarily focused on logical data modeling. Background includes analyzing operational data flows, translating business requirements into structured data processing logic, and developing SQL, PL/SQL, and Python solutions that support reporting and cross-system data use. Experience includes integrating data from vendor and internal systems, modernizing legacy reporting processes, automating manual workflows, and improving data quality and reliability in production environments.

Education

Master of Science in Computer Science | 2024

New Jersey Institute of Technology (NJIT) | Newark, NJ

Bachelor of Arts in Strategic Public Communication | 2015

Rutgers University | New Brunswick, NJ

Technical Skills

Data Engineering and Data Management:

Oracle, PostgreSQL, MySQL, SQL, PL/SQL, Data Integration, ELT Processes, Data Modeling, Dimensional Modeling, Data Quality, Performance Tuning, Databricks, PySpark, Delta Tables

Programming and Automation:

Python, Java, Shell Scripting, Workflow Automation, Batch Processing Automation

Data Systems and Reporting:

Power BI, ORDS, JSON and CSV Outputs, PDF Generation, Legacy Report Migration, API-Driven Data Access

Systems and DevOps Tools:

Git, Docker, Azure DevOps, CI/CD Deployments

Professional Experience

Software Development Specialist | Nov 2022 – Present | 35 hrs/week

New Jersey Department of the Treasury | Trenton, NJ

Analyze how regulatory and financial data is generated and exchanged across Notary, Apostille, Uniform Commercial Code (UCC), and Business Services systems, applying structured data design principles to organize data for consistent reporting and cross-system use.

Collaborate with stakeholders and program leadership to gather reporting requirements and translate business needs into structured data processing features and reporting solutions.

Integrate public-facing vendor data feeds with internal Oracle databases, performing systems analysis and designing source-to-target transformation logic to standardize and combine data from multiple heterogeneous sources.

Design and develop PL/SQL packages, procedures, and triggers to implement business rules and data warehouse ETL processes, transforming operational data into structured datasets for reporting and system use.

Create and maintain database views and reporting tables using logical data modeling to organize data that serve as the primary source for Business Intelligence tools and operational reporting across multiple Treasury programs.

Replace legacy Excel and VBA reporting processes with Python and Streamlit applications that generate Excel reports populated with aggregated database data, improving reliability and reducing manual effort.

Automate manual processes in the AIX batch processing environment and improve parameterization of batch components to increase repeatability, reduce dependence on manual intervention and eliminate weekend support requirements.

Investigate data integration issues, identify inconsistencies between vendor and internal sources, and implement validation checks and transformation improvements to strengthen data quality and reporting accuracy.

Document transformation logic, field definitions, and processing rules to support ongoing maintenance and knowledge transfer of data structures and reporting processes.

Provide technical guidance and coordinate development work to support delivery and maintenance of enterprise data processing components.

Analyze reporting performance issues and apply indexing, partitioning, and query optimization techniques to maintain efficient data processing and retrieval.

Health Navigator | Jan 2018 – Nov 2022 | 40 hrs/week

Rutgers Biomedical and Health Sciences | New Jersey

Worked with healthcare data systems to manage records, coordinate services, and support program operations. Improved workflow processes to enhance data accuracy and operational efficiency. Collaborated with multidisciplinary teams to support program evaluation and planning based on service data.

Program Coordinator | Oct 2008 – May 2012 | 20 hrs/week

Brookdale Community College | Lincroft, NJ

Coordinated educational program operations, organized activities, developed structured learning plans, and worked with students, families, and partner schools to support academic readiness and program success.

WordPress Consultant | Jan 2016 – Jan 2018 | 20 hrs/week

Independent Consultant | Greater New York City Area

Developed website workflows using WordPress, HTML, and CSS. Automated repetitive tasks using Python scripts and integrated analytics tools to track engagement and improve usability.

Email Marketing and Database Intern | Jan 2015 – May 2015 | 8 hrs/week

Alfa Art Gallery | New Brunswick, NJ

Managed and maintained email marketing database and supported targeted communication campaigns.