DATA ANALYST

DEFINITION

Under general supervision, performs technical tasks related to the configuration, troubleshooting, maintenance, and monitoring of the District's databases, data models, and data platforms; performs database performance analysis and assists in building interfaces between enterprise databases and end-user query tools; performs analysis, troubleshoots database problems, and ensures data integrity; creates reports; provides recommendations, support, and training to other information services support staff and District users in areas of responsibility; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned ETS supervisor. Exercises no supervision of staff.

CLASS CHARACTERISTICS

This class is responsible for performing complex technical assignments, projects, and analyses in support of District databases, creating data models, or managing complex data classification structures and/or manipulating data layers and data sets for District-wide systems. Responsibilities require the use of tact, discretion, and independent judgment and to have full and thorough knowledge of the concepts, practices, procedures, and policies of assigned function. This classification is distinguished from the Senior Database Administrator by the complexity and the amount of discretion exercised over problems and resolutions, as well as the latter serves as a technical leader and subject matter expert in specific area(s).

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

➢ Plans, coordinates, installs, implements, tests, and maintains databases and applications; designs and maintains database infrastructure; creates and manipulates spatial data tables and layers; integrates data and functionality with other specialized applications.

➢ Designs application processes and work flow strategies for the management, access, and retrieval of data, defines data rules and relationships, and develops methods for quality control of databases.

➢ Designs, builds, and maintains the District's databases, websites, and web-based and mobile applications.

➢ Recommends and implements strategies and procedures for integrating data standards, use, and methods of analyses to support District projects, programs and services.

➢ Individually or as a team member, works on and is responsible for applications research, development, conversion, installation, and maintenance projects, including conception and initiation, definition and planning, launch and execution, monitoring and controlling, and close-out; defines project requirements, methods, and end objectives in consultation with end users; estimates and tracks project budget; coordinates project activities with team members, other information technology services staff, user representatives, and outside vendors.

➢ Organizes and converts data into relational tables using normalization process; analyzes access paths by identifying logical and physical indices.

- ➢ Extracts, Transforms, and Loads (ETL) data from disparate systems to be loaded into other systems, data stores, and/or data warehouses.
- ➢ Performs database performance analysis and assists in building interfaces between enterprise databases and end-user query tools.
- ➢ Identifies table relationships and builds Structured Query Language (SQL) data manipulation scripts to extract data; troubleshoots data extraction issues.
- ➢ Performs advanced database queries and develops reports using SQL.
- ➢ Develops applications to extract, transform, and report data used for business process analysis and decision-making.
- ➢ Maintains relational data models as new information and table structures are added.
- ➢ Develops and documents operational and database standards, scripts, guidelines, and usage procedures; oversees the setup and implementation of IT systems and databases to ensure data integrity and compatibility.
- ➢ Writes and maintains user and technical operating instructions and documentation; provides training to users and other technical staff and advises on best practices.
- ➢ Maintains a healthy database environment for testing and quality assurance purposes.
- ➢ Stays abreast of new trends and innovations in technology related to District operations; researches, recommends, and evaluates vendor solutions and technologies; implements improvements; works with staff to maintain, revise, or improve operations and systems.
- ➢ Provides technical assistance, training, and customer service to staff and/or users.
- ➢ Installs database products and upgrades; performs change control; verifies system resources as required; plans and executes backup and recovery.
- ➢ Ensures that modifications to operating systems are compatible with the overall design of the database system.
- ➢ Monitors, tunes, and optimizes database and application performance.
- ➢ Resolves database errors and failures, manages system access, audits activities and resource utilization, and generates database objects availability.
- ➢ Implements and documents database back-up and recovery processes and procedures; develops scripts and workflows to support stand-by recovery options.
- ➢ Ensures database security by preparing access and control policies and procedures and reviewing permissions a regular basis.
- ➢ Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- ➢ Database design and administration in one or more of the following environments: Oracle, Microsoft SQL Server, MYSQL, and Access.
- ➢ Reporting tools such as ARGOS and business intelligence tools such as Operational Data Store (ODS), Enterprise Data Warehouse (EDW), Degree Works,
- ➢ Principles and practices of configuring, changing, and implementing system backup solutions.
- ➢ Modern Specific (UNIX) procedures/commands related to Relational Database Management System (RDBMS) analysis and programming.
- ➢ Data management theory, principles, and practices and their application to a wide variety of services and programs.

➢ Modern web-programming languages, environments and concepts to include but not limited to, several of the following: HTML5, Java, Javascript/jQuery, PLSQU, ColdFusion, Perl, PHP, AJAX, CSS and XML.
➢ Computer equipment capacity and limitations, operating time, form of desired results.
➢ Integration of enterprise system components.
➢ Security measures as they apply to a database environment.
➢ UNIX, Windows, Macintosh server operating systems and related software applications.
➢ Technology, hardware and software, and current applications and practices related to data platforms.
➢ Techniques and methods of database system evaluation, implementation, and documentation.
➢ Recent and on-going developments, current literature, and sources of information related to the operations of the assigned programs.
➢ English usage, spelling, vocabulary, grammar, and punctuation.
➢ Techniques for providing a high level of customer service by effectively dealing with vendors and District staff.

Ability to:

➢ Diagnose problems, perform remedial actions to correct problems, and/or recommend and determine solutions.
➢ Lead groups or working sessions to establish new processes or technical design for improvement
➢ Install, configure, test, upgrade, and tune databases.
➢ Use methods of ETL for data loads between disparate systems.
➢ Design, develop, and maintain applications using various development toolsets.
➢ Develop test scripts that allow both functional and technical team participation.
➢ Regularly report status and raise issues/risks as appropriate.
➢ Develop prototypes/proofs of concepts to validate key project assumptions.
➢ Organize, maintain, and update records systems and prepare reports.
➢ Use English effectively to communicate in person, over the telephone, and in writing.
➢ Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
➢ Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.
➢ Demonstrate understanding of, sensitivity to, and respect for the diverse academic, socio-economic, ethnic, religious, and cultural backgrounds, disability, and sexual orientation of community college students, faculty and staff.

Education and Experience:
Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from an accredited four-year college or university with major coursework in management information systems, computer science, or a related field and two (2) years of progressively responsible experience in database management and specific to the specialty area assigned which includes logical and physical database administration; integration; business intelligence, analytics, and report scripting; and/or data quality and integrity.

Licenses and Certifications:

➢ None.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. Standing in and walking between work areas is frequently required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification frequently bend, stoop, kneel, and reach to perform assigned duties, as well as push and pull drawers open and closed to retrieve and file information.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate levels, controlled temperature conditions, and no direct exposure to hazardous physical substances.

Salary Grade: C1-70
FLSA: Non-Exempt
EEO Code: H-50
Board Approved: April 2021