Midpeninsula Regional Open Space District

SENIOR TECHNOLOGIST

DEFINITION

Under general direction, performs the most complex and varied technical tasks related to the design, configuration, troubleshooting, maintenance, and monitoring of the District's information systems, and databases; serves as a technical leader and subject matter expert in information and technology management; performs database performance design and analysis; troubleshoots hardware and software problems and end-user query tools; performs analysis 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 direction and supervision from the assigned GIS or IT Program Administrator. May exercise supervision over assigned staff and provides technical and functional direction and training to lower-level staff.

CLASS CHARACTERISTICS

This is an advanced journey-level class for the IT Technician and Data Analyst Series. Incumbents serve as subject matter experts in specific area(s), perform complex and varied technical support, provide analytical support for District-wide database applications, provide a wide range of assigned information technology services and frequently solve problems requiring analysis of unique issues or problems without precedent and/or structure. Incumbents serve as technical lead for assigned projects. Employees at this level are required to be fully trained in all procedures related to assigned area(s) of responsibility, working with a high degree of independent judgment, tact, and initiative. This classification is distinguished from the Data Analyst II and IT Technician II classes by responsibility for the design, development and integration of databases, systems, and applications across multiple platforms, and the complexity of work with respect to systems integration and expertise required to manage multiple applications.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the functions of the job.

- Performs highly complex technical support in the design, development, testing administration and maintenance of the District's databases; ensures the availability of database systems, and overall data integrity.
- Designs and develops processes and systems to ensure the backup and security of the Districts' database systems; works with departments and management to develop database security and recovery policies and procedures.
- Serves as a technical advisor to departments on the feasibility and operational requirements needed for enterprise applications development, deployment, and integration across multiple platforms,

including hardware and software needs; ensures design meets user needs; develops testing, quality assurance and implementation plans.

- Functions as a liaison between users to ensure standards and protocols are maintained; assists in coordinating activities with other information services staff.
- Manages the District's database storage and warehousing systems and processes; works with management to identify future storage requirements; provides recommendations to management on the development of long- and short-term database system plans.
- Performs database performance analysis and builds interfaces between enterprise databases and end-user query tools.
- Serves as technical lead for assigned projects, including developing project budget and allocating resources, gathering user and systems requirements, working with vendors, contractors, project managers, and other project staff, installing, configuring, testing, and providing general technical support, and developing technical and user documentation.
- Provides direction during major database incidents to ensure an expedient response and resolution; maintains communication with all stakeholders on database status; identifies underlying problems causing incidents and designs, proposes, and implements resolutions.
- Provides specialized and complex technical support and assistance to staff concerning assigned databases; serves as the primary contact for and resolves related issues, conflicts, and concerns; responds to inquiries and provides information concerning system operations, projects, malfunctions, equipment, upgrades, practices, procedures, and related software applications.
- Analyzes, evaluates, and diagnoses computer hardware and software problems associated with the District's information technology systems and related equipment; performs diagnostic testing and repairs equipment as needed.
- Designs, installs, maintains, and configures database software systems and all interconnected technologies, including report building, document enhancement, and data stores and warehousing systems.
- Organizes and converts data into relational tables using normalization process; analyzes access paths by identifying logical and physical indices.
- Designs and maintains relational data models as new information and table structures are added.
- 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 and implements applications to extract, transform, and report data used for business process analysis and decision-making.
- Ensures database security by preparing access and control policies and procedures and reviewing permissions a regular basis.
- Administers servers and databases; maintains the backup system for the District's data; designs, configures, and implements disaster recovery and backup solutions and procedures.
- Monitors and analyzes network and server performance; reviews system event/audit logs; detects problems and identifies inefficient use of resources.
- Participates in the review and recommendation of contracts with outside vendors and consultants; administers, monitors, and evaluates contract scope of work; reviews design documents to ensure technical integrity.
- Researches and provides recommendations or with approval, purchases tools, supplies, and repair parts from a variety of sources.
- 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.
- Writes and maintains user and technical operating instructions and documentation; provides training to users and other technical staff and advises on best practices.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles, practices, and methods of administering and coordinating a comprehensive information system/program.
- Various procedures/commands related to Relational Database Management System (RDBMS) design, analysis, and programming.
- Advanced data management theory, principles, and practices and their application to a wide variety of services and programs.
- Industry standards for the backup and recovery of network and server infrastructure and data.
- Recent and on-going developments, current literature, and sources of information related to information systems and programs.
- Various software packages including word processing, spreadsheet, SQL database and database management, and reporting tools.
- Advanced principles and practices of designing, configuring, and implementing system backup solutions.
- Principles and practices used in the operations, maintenance, repair, and administration of assigned systems and equipment.
- Technology, hardware and software, and current applications related to GIS.
- Technology, hardware and software, current applications and methods related to Open Data and/or Open Government.
- ETL processes for data loads between disparate systems.
- Techniques and methods of database system evaluation, implementation, and documentation.
- Troubleshooting, configuration, and installation techniques.
- The organization, operation, and functions of the department as necessary to assume assigned responsibilities and to determine appropriate point of escalation.
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Principles and procedures of record keeping.
- Modern office practices, methods, and computer equipment and applications related to the work.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with vendors and District staff.

When assigned to the GIS function:

- Principles and techniques of cartography and publication-quality map production using ArcGIS and other software.
- Methods and techniques used in writing Python geo-processing scripts.
- Experience developing and deploying services for ArcGIS Server.
- Database design and integration as it relates to spatial database development and integration with enterprise business systems.
- Theories and techniques of GIS applications and web mapping technology.
- Familiarity with natural resource management issues and the principles and practices of open space and/or park planning.
- Technology, hardware, software, and current applications related to GIS systems, including database management, mapping and report generation, and desktop publishing systems.

When assigned to the IT function:

- Windows, SQL server, and Unix operating systems; local area network (LAN) and wide area network (WAN) design, operations, and support, OSI, and design/routing.

- Methods and techniques of scripting including Bash, MS SQL Server, and Visual Basic.
- System administration including Exchange, Windows Server, and VOIP PBX.
- Operate and script in Windows PowerShell, Exchange PowerShell, MS SQL Server or the like.
- Virtualized server design and configuration utilizing Storage Area Networks (SAN) and server virtualization software like VMware.
- Industry standards for the backup and recovery of network and server infrastructure and data.
- Recent and on-going developments, current literature, and sources of information related to information systems and telecommunications programs.

When assigned to the Data function:

- Data management theory, principles, and practices and their application to a wide variety of services and programs.
- Technology, hardware and software, and current applications and practices related to data platforms such as GIS.
- Commands related to Relational Database Management System (RDBMS) analysis and programming.
- Builds/develops Structured Query Language (SQL) data manipulation scripts to extract data; troubleshoots data extraction issues.
- Performs database queries and develops reports using SQL.
- Techniques and methods of database system evaluation, implementation, and documentation.
- Troubleshooting, configuration, and installation techniques.

Ability to:

- Perform complex technical support functions for assigned responsibilities; troubleshoot problems and take appropriate action or escalate to appropriate staff as needed.
- Diagnose complex problems, perform remedial actions to correct problems, and/or recommend and determine solutions.
- Oversee and perform complex functions in the installation, implementation, testing, and maintenance of a variety of database systems and other components.
- Perform advanced analyses of informational requirements and needs, identify problems, provide technical advice and consultation, and ensure efficient computer system utilization.
- Analyze data and recommend logical solutions to problems.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- Deal tactfully with the customers and staff in providing information, answering questions, and providing customer service.
- Establish and maintain a variety of filing, record keeping, and tracking systems.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- 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.

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, geography, engineering, environmental science or a related field and five (5) years of progressively responsible experience in database management, experience with information technology management, systems integration; business intelligence, project management, analytics, report/scripting; and/or data quality and integrity.

Licenses and Certifications:

- Possession of information technology industry recognized certifications are desirable.

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.

EFFECTIVE: August 2016
REVISED: N/A
FLSA: Exempt