Midpeninsula Regional Open Space District

DATA ANALYST I/II

DEFINITION

Under general supervision (Data Analyst I) or direction (Data Analyst II), performs technical tasks related to the configuration, troubleshooting, maintenance, and monitoring of the District's databases, data models, and data platforms such as Geographic Information Systems; evaluates and analyzes data requirements, designs database infrastructure, and ensures data integrity; 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 an IT Program Administrator, GIS Program Administrator, or Manager. Exercises no supervision of staff. May provide functional direction of lower level staff and interns.

CLASS CHARACTERISTICS

Data Analyst I: This is the entry-level class in the Data Analyst series. Employees at this level perform the more routine database support assignments, or manage data classification structures and/or provide data layers and data sets for District-wide systems such as Geographic Information System. Positions at this level are not expected to function with the same amount of knowledge or skill level as positions allocated to the Data Analyst II level which exercise more independent discretion and judgment in matters related to work procedures and methods.

Data Analyst II: This is the journey-level class in the Data Analyst series responsible for performing moderately complex technical assignments, projects, and analyses in support of District databases, managing complex data classification structures and/or manipulating data layers and data sets for District-wide systems such as Geographic Information System. 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 Technologist by the complexity of work with respect to systems integration and expertise required to manage or support the application, 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).

Positions in the Data Analyst class series are flexibly staffed and positions at the II level are normally filled by advancement from the I level requiring two (2) additional years of experience and after gaining the knowledge, skill, and experience which meet the qualifications for and after demonstrating the ability to perform the work of the higher-level class.

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.

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

- Works with project managers and technical experts to implement strategies and procedures for integrating data standards, use, and methods of analyses to support District projects, programs and services.
- 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.
- Plans, coordinates, installs, implements, tests, and maintains databases and applications including the District-wide Geographic Information System (GIS); designs and maintains database infrastructure; creates and manipulates spatial data tables and layers; integrates data and functionality with other specialized applications.
- 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.
- 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; works with project managers and/or technical experts to setup and implement IT systems and database across multiple platforms, ensuring 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.
- Performs other duties as assigned.

When performing duties related to the GIS function:

- Individually or as a team member, works on and is responsible for GIS 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; coordinates project activities with team members, other information technology services staff, user representatives, and outside vendors.
- Serves as a technical resource to all District departments, including providing assistance and training in the proper use of GIS data and systems, and recommending, troubleshooting, and providing support for GIS software, databases, and other related applications.
- Installs, configures, maintains, and upgrades GIS software packages and hardware equipment; evaluates problem severity and repairs needed; troubleshoots issues and refers to specialized or higher-level personnel and/or vendor for resolution as necessary.
- Maintains a comprehensive library of data layers related to District land holdings, natural and cultural resources, trails and other recreational facilities, and other essential data sets.
- Creates and maintains a variety of maps and tabular data from a variety of sources; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information; develops quality control procedures.

- Conducts spatial analyses and ecological modeling in support of open space planning, natural resource planning, and land acquisition activities.
- Prepares presentation-quality maps and exhibits for use in Board meetings, other public meetings and workshops, and for publication on the internet.
- Develops and maintains the District's Global Positioning System (GPS) Equipment, including developing custom applications to streamline and standardize GPS field collection and train staff of the proper use of related equipment.

QUALIFICATIONS

Some knowledge, skills and abilities may be performed by positions at the entry (I) level in a learning capacity:

Knowledge of:

- 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.
- Techniques and methods of database system evaluation, implementation, and documentation.
- Troubleshooting, configuration, and installation techniques.
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Principles and practices used in the operations, maintenance, repair, and administration of assigned systems and equipment.
- Recent and on-going developments, current literature, and sources of information related to the open space operations and assigned programs.
- 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.
- Methods and techniques used in spatial analysis and ecological modeling.

Ability to:

- Perform analyses of informational requirements and needs, identify problems, provide technical advice and consultation, and ensure efficient computer system utilization.
- Conduct research projects on a wide variety of database system issues, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Coordinate and plan development, enhancement, and maintenance projects.
- Identify, research, and recommend cost-effective technical system improvements.
- Interpret, apply, explain, and ensure compliance with applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Diagnose problems, perform remedial actions to correct problems, and/or recommend and determine solutions.
- Lead focus groups or working sessions to establish new processes or technical design for improvement.
- Perform routine to complex functions in the installation, implementation, testing, and maintenance of a variety of database systems and other components.
- Implement a GIS program that includes effective database development, management, accessibility, and systems integration.
- Prepare clear and concise technical documentation, user procedures, reports of work performed, and other written materials.
- 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:

Data Analyst I and II: Equivalent to graduation from an accredited four-year college or university with major coursework in management information systems, computer science, GIS, or a related field. When assigned to the GIS function, knowledge of or education in environmental science or resource management is desirable.

Data Analyst I: One (1) year of experience in providing technical support 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.

Data Analyst II: Five (5) years of progressively responsible experience in technical or data management, equivalent to an Data Analyst I at the District, and specific to the specialty area assigned which includes: business intelligence, analytics, data reporting and scripting; and/or data quality and integrity. Technical project management is desirable.

Licenses and Certifications:
- Possession of a valid California Driver's license.

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. This job involves occasional field work requiring traversing sites to identify field conditions. 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