



Job Description

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job.

Job title	Senior Applications Engineer
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GENERAL PURPOSE

Under general direction, performs complex and advanced-level analytical duties in the development, enhancement, modification, and maintenance of District applications; on an ongoing basis, leads a team of internal staff or consultants on projects; serves as technical resource on systems design and database structures; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

This is the advanced-level classification in the Applications Developer series responsible for performing the most complex work assigned to the series. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions in this classification rely on experience and judgment to perform assigned duties. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver services and complete assignments. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from assigned supervisory or management personnel. Exercises functional or technical direction over and provides training to lower-level staff.

TYPICAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this position.

- Leads a project team on assigned projects, coordinating and inspecting the work of professional and technical staff and providing advanced technical guidance and training as needed; determines project requirements, business needs, purpose or justification, identifies stakeholders, and functional area participation; refines project requirements, scope, objectives, deliverables, acceptance criteria, constraints, assumptions, and alternative solutions; estimates activity costs and

- overall project budget; identifies roles and responsibilities; determines information and communication needs of stakeholders.
- Provides daily work instructions, guidance, and performance feedback to team members; gives input for team member performance appraisal.
 - Assumes responsibility for continuous delivery of automated processes; applies Service Oriented Architecture (SOA)/Business Process Management (BPM) principles and other innovative methodologies throughout the project life cycle including business process requirements, design and architecture, development standards, coding, testing, system integration and administration phases; conducts research to stay current on technology advancements in SOA/BPM methodologies and standards.
 - Creates work breakdown structures; performs definition, sequencing, resource estimates, and duration estimating of project activities for overall schedule development.
 - Follows the change management process and performs all necessary technical and project management duties needed for successful project implementation.
 - Develops and enforces the methodology by which District information technology projects are defined, documented, and delivered; reviews and provides guidance to business units during the research and selection phase for all major software implementations; works with the information systems staff to establish and enforce architectural standards that form the basis of all technology projects.
 - Translates system specifications into logical processes to prepare detailed system designs or enhancements; develops coding standards; conducts system design, system analysis, and programming of applications or enhancements, using applicable business programming languages.
 - In collaboration with other technology staff, meets with users; studies application requirements; researches methods to meet end-user requirements; prepares documentation and drawings for coding and logic flow; writes, edits, debugs, and revises program code for applications modifications, conversions, or enhancements; designs and documents screens, utility programs, and menus.
 - Evaluates and tests vendor software packages for conformance with user requirements and District software standards for compatibility, interconnectivity, and ease of maintenance; evaluates vendor software packages by reviewing documentation, interviewing users, and testing the application in a demonstration environment; analyzes and evaluates program code to identify appropriate modification and enhancement requirements; develops and presents design and technology alternatives; recommends the purchase or development of software to achieve user objectives consistent with District standards.

- Performs systems interface and data administration functions, including database design; establishes data validation standards; defines field descriptions; establishes user access rules; archives and reloads data; develops and implements systems security parameters and related functions.
- Creates and codes applications; documents program structure and utilizes tools for the storage and retrieval of program source code and other files; performs peer code reviews by analyzing structure, clarity, input validation, documentation, and security.
- Designs, edits, writes, tests, documents, and implements system maintenance, software upgrades and conversions, program modifications and enhancements; maintains associated database files, scripts, code, stored procedures, and triggers.
- Creates and maintains software documentation; trains and assists employees with systems enhancements; assists technology staff in the design and development of end-user reports as well as implementing and supporting back-office reports.
- Oversees applications development, enhancement, conversion, installation and/or maintenance tasks or projects in support of the District's comprehensive computer systems programs; plans, organizes, and defines scope, requirements, methods, end-user objectives, schedules, and priorities; coordinates activities with user representatives and outside vendors or consultants.
- Evaluates information gathered from multiple sources, reconciles conflicts, logically classifies information; uses different visualization techniques and presents the results of data exploration studies; identifies and documents sources of existing data as well as the new data; collaborates with business partners and conducts data profiling and predictive analysis using a variety of tools.
- Creates conceptual, logical, and physical data models and determines the most appropriate data representation for consumption by various business units, to include relational, dimensional, object, key-value charts, and graphs, etc.; conceptualizes and designs applications using a variety of tools and programming techniques; creates user interfaces and designs main programs to meet user requirements.
- Develops, oversees, and participates in executing system test plans to ensure application performance conforms to specifications; modifies programs to correct errors and optimize system performance and cost-effectiveness; maintains database files; works with assigned testers and the Quality Assurance division to execute test plans, ensuring performance, outcomes, and security are within specification; modifies or assists in modifying programs to correct identified issues.
- Provides ongoing systems application maintenance and administration support; troubleshoots systems to identify and resolve problems.

- Ensures staff observe and comply with all District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

REQUIRED QUALIFICATIONS

Knowledge of:

- Principles or providing lead direction and training.
- Principles and practices of leadership.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Principles and practices of project management/project life cycles.
- Change management principles and practices.
- Oracle SOA architecture concept design principles and methodologies used through BPM project life cycles.
- Principles, practices, framework and a diverse range of programming languages used in software development including those used in client-side and cross-platform environments.
- Asynchronous application program concepts and methods.
- Theory and concepts of Development and Operations (DevOps) as it relates to the development and deployment of software.
- Fundamental web development principles, practices, methods and protocols.
- Methods, techniques and tools used in browser development and multiple browser compatibility including responsive design principles.
- Multiple testing methods used in software development to determine functionality and reliability. Principles and practices of database development including query languages, entity relationship diagrams (ERD's), stored procedures and database security methods.
- Principles, methods, and techniques in the design and operation of information systems for platforms equivalent to those used by the District.
- Operational characteristics of applications used in business processes.
- Principles and practices in the design of data models corresponding to business processes and data flows.
- Principles and practices of systems infrastructure as it relates to applications development and testing and system interface.
- Methods and techniques of developing work flow diagrams to translate business processes into automated solutions.
- Principles and practices of systems analysis and design, including database design and management.
- Standard software development tools and utilities.
- Computer programming principles, techniques, and procedures for business and technical system applications.

- Standard business and scientific programming languages and utilities similar to those used by the District.
- Accounting, statistical, business, and office procedures commonly supported by systems and applications.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Effectively lead the work of project teams to accomplish technology project goals and objectives.
- Understand and apply user systems specifications in writing program code in multiple languages.
- Analyze and define user problems and requirements and develop efficient, cost-effective systems solutions.
- Assist with information systems and procedures analysis and feasibility studies.
- Plan and complete applications development projects efficiently and in accordance with District quality standards.
- Prepare clear, concise, and accurate program documentation, user procedures, reports of work performed, and other written materials.
- Develop and document work flows and business processes.
- Develop, implement, and manage testing processes.
- Conduct comprehensive research on a diverse range of technology topics.
- Troubleshoot hardware and software problems and make or recommend modifications.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Eastern Municipal Water District
Job Title: Senior Applications Engineer
Last Update: October 2019

Experience:

Any combination of experience and education that provides the required knowledge and abilities is qualifying, along with the specific licenses/certifications as outlined below:

- Six (6) years of progressive experience providing analytical support to enterprise or customized applications, or two (2) years as an Applications Developer II with the District.

Education:

- Equivalent to a bachelor's degree from an accredited college or university with major coursework in information technology, computer science, programming, or a closely related field.

Licenses/Certifications:

- A valid California driver's license and the ability to maintain insurability under the District's Vehicle Insurance Policy.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by employees to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

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; to operate a motor vehicle and visit various District sites; and hearing and speech to communicate in person and over the telephone. This is primarily a sedentary office classification although standing in work areas and walking between work areas may be 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 occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

Eastern Municipal Water District
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Last Update: October 2019

This job description has been reviewed and approved by all levels of management in cooperation with the union (if applicable):

Approved by:	<i>Board of Directors</i>
Date adopted:	<i>October 2, 2019</i>
Date modified:	
FLSA determination:	<i>Exempt</i>

Job Description Acknowledgment

I have received, reviewed, and fully understand the job description for Senior Applications Engineer. I further understand that I am responsible for the satisfactory execution of the essential functions described therein, under any and all conditions as described.

Employee Name (print): _____ *Date:* _____

Employee Number: _____

Employee Signature: _____