Classification: Information Technology Specialist II

Working Title: Back-end & Data Analytics Developer

Position Number: 358-516-1414-004

Division/Unit: ITSD/EPAS/DIAS

Assigned Headquarters: Sacramento Headquarters

Position Eligible for Telework (Yes/No)**:** Yes

Job Description Summary

Under the general Direction of the Information Technology Manager I in the Data, Information & Analytics Services (DIAS) unit, the Information Technology Specialist II serves as a lead back-end & Data Analytics developer supporting the Lottery's most complex Business Intelligence (BI) and Business Analytics (BIBA) platforms. The incumbent is responsible for the design, development, operation, and maintenance of BI, reporting and software systems. The technical aspects of this position include cloud migration tasks, integration, and maintenance of the BIBA platform, applications, data warehouses, and related components. Duties encompass the research, design, documentation, development, configuration, testing, implementation, and management of data processing functions including defining, extracting, transforming, loading, and archiving data; analysis of business information, standards development, analytical data models, and conceptual database designs; developing database strategies, structures, systems monitoring, performance, capacity, and planning for expansion. The back-end developer will be responsible for developing, managing, and maintaining BIBA data lakes, cubes, data pipelines and security by utilizing Synapse, R, SQL Server Integration Services (SSIS), Databricks, the Snowflake model, Online Analytical Processing (OLAP) and other related technologies. The duties for this position are focused on the Software Engineering and Systems Engineering domains. Work may be assigned in other domains as needed.

Job Duties

30%   Leads in all phases of Data Warehouse Architecture, development, and maintenance, including identification, design, development, implementation, and performance improvement. Designs and develops Data Warehouse Extract, Transform and Load (ETL) solutions. Formulate organizational data strategy, including standards of data quality, the flow of data within the organization, and security of data, manage end-to-end data architecture; designing the technical architecture; ensuring data accessibility, accuracy, and security. Participates with DIAS staff in the design and development of databases, data warehouses, and other data structures needed to support the Lottery's information and analytic needs. This includes support of BI and analytical services. Designs and implements innovative reporting and analytics solutions to transform data into valuable information to facilitate and inform Lottery business decision-makers. Follows organizational methods and processes for data collection, storage, integration, and utilization in data systems and organizations. Develops and maintains practical expertise with the hardware and software for Lottery data warehouses, data lakes, and related systems.

20%   Assists in the ongoing development and process improvement of technical best practices for data movement, data quality, data cleansing, and other ETL related activities. Works closely with project team

to ensure that the endto-end design and delivered solution meets changing business and data requirements. Monitors the Data Warehouse and Business Intelligence systems performance and integrity. Supports the development and validation required through the Software Development LifeCycle (SDLC) of the Data Warehouse and BI systems, maintains user connectivity, and provides adequate security for the Data Warehouse environments. Troubleshoots, resolves, and tests all defects and issues. Designs, develops and implements complex scripts and routines for enhancing and automating administrative applications monitoring and management. Analyzes database system performance and identifies areas of improvement by providing options and technical recommendations using techniques such as impact analysis and alternatives analysis. Reviews user account provisioning with appropriate roles and permissions as per enterprise-wide security policies, procedures, and standards. Provides management with various reports indicating system usage and effectiveness.

20%   Monitors incoming tickets on defect tracking system. Troubleshoots technical problems and provides effective solutions. Coordinates and monitors customer acceptance testing. Documents and maintains application development standards, SDLC best practices, and change management policies and procedures. Acts as a mentor to other team members to ensure processes are followed, repeatable, and measured for continuous improvement. Works collaboratively across teams and/or independently to design and build solutions.

15%   Obtains and maintains expertise in Lottery data and infrastructure. Collaborates with ITSD staff and subject matter experts to identify performance needs and timeliness of implementing changes to systems. Improves Lottery application functionality by investigating, recommending, and implementing new technologies. Performs the duties of maintaining storyboards, activity diagrams, data flows, process flows, and other technical diagrams that accurately represent all findings. Works closely with database analysts to tune overall data systems, reports, and reporting dashboard performance. Supports and contribute to project management activities to ensure that interdependent projects are coordinated with the business areas as well as within ITSD and in accordance with Lottery standards and requirements.

10%   Responsible for providing information technology technical services and support for applications. Provides back-up support to other team members in their absence. Maintains detailed knowledge of the application systems to address questions and troubleshoot as necessary. Works independently or with minimal guidance when necessary to identify and develop detailed software/system requirements and change requests. Maintains documentation on all assignments. Champions and exercises continuous improvement while leveraging industry best practices. Maintains and upgrades technical skills and awareness of current best business practices based on research as it applies to departmental and statewide financial management processes and systems to support continual service improvement.

Marginal Functions

5%   Perform other job-related duties as assigned such as but not limited to: developing/maintaining various documentation, acting as a project lead, and performing analysis and consulting services; developing/maintaining various documentation, performing advisory and consulting services, etc. Serves as an advisor on key governance bodies; and participates, as needed, in ad-hoc committees, work groups, and projects.

Scope and Impact

a. Consequence of Error: ITSD is responsible delivering high-quality technology services and solutions that enable the business to achieve its goals and objectives. With over 1000 staff located in offices throughout the state, the Lottery's sole mission is to provide supplemental funding for California's public schools and colleges. While the Lottery is a public agency, it receives no public funding. Instead, all operating and administrative expenses are raised through the responsible sales of our games. Disruptions that impact revenue generation would significantly affect the Lottery's ability to achieve its mission. In addition, incorrect data supplied to executives, upon which members rely for decision-making criteria, and/or unsupported recommended approaches or solutions could result in wasted resources and inefficient use of Lottery resources. Negative decisions on mission critical Lottery systems could result in outages where such failures would be a significant embarrassment to the Lottery, the Governor, and the state.

Errors, incomplete staff work, poor recommendations, and/ or poor decisions may result in the loss of or disruption of major service to customers and/or the inability of ITSD to meet business needs. The consequence of error includes adverse impact to critical services and operations, and the potential of reduced revenues should services be disrupted. As appropriate, staff must be available to respond to service outages that affect daily operations to ensure business continuity.

b. Administrative Responsibility: None, but Back-end & Data Analytics Developer will assist with the training of any new personnel for the unit.

c. Supervision Exercised and Received: The Back-end & Data Analytics Developer is under general direction of and receives most assignments from the Application Development & Support Supervisor (IT Sup II); direction and assignments may also come from the extended Information Technology Services Division (ITSD) management team.

d. Personal Contacts: The Back-end & Data Analytics Developer interacts with various levels of Lottery executives, managers, stakeholders, business areas, staff, vendors and consultants, and other state agencies.

Physical and Environmental Demands

Not Applicable.

Working Conditions and Requirements The incumbent will work in a fast-paced environment, with competing priorities, and critical deliverables.

a. Schedule: This position has work hours from 8:00 a.m. to 5:00 p.m. after hours work. May require occasional work after hours, on weekends, and on holidays.
b. Travel: Statewide overnight travel may be required.
c. Other: This position may be required to carry a Lottery issued cell phone. This position may be required to be reachable outside of normal business hours.

Effective Date:
_____

NOTE: The statements contained in this job description reflect general details as necessary to describe the principal functions of this job. It should not be considered an all-inclusive listing of work requirements. The incumbent of this position may perform other duties (commensurate with this classification) as assigned, including work in other functional areas to cover during absences, to equalize peak work periods or otherwise balance the workload.

SUPERVISOR'S STATEMENT:
- I have discussed the duties and responsibilities of the position with the employee.
- I have retained a copy of the signed duty statement.

_____ _____ _____
Supervisor Signature   **Printed Name**   **Date**

EMPLOYEE'S STATEMENT:
- I have discussed the duties and responsibilities of the position with my supervisor.
- I have signed and received a copy of the duty statement.
- I am able to perform the essential functions listed with or without Reasonable Accommodation.
- I understand that I may be asked to perform other duties as assigned within my current classification, including work in other functional areas as business needs require.

_____ _____ _____
Employee Signature   **Printed Name**   **Date**

Duty Statement Instructions (Rev. 04/2023)

NOTE: After inserting the text/information into the duty statement, remove all "Insert Text" or "Insert Text to describe the following" prompts.

Classification: Enter the legal class title of the position (e.g., Office Technician (Typing), Staff Services Analyst, District Sales Representative, etc.).

Working Title: Enter the working title of the position if different from the legal class title.

Position Number: Enter the full position number assigned as shown on the department's organization chart (e.g., Agency: 358, Unit: 031, Class: 5157 (SSA), Serial: 001: [358-031-5157-001]).

Division/Unit: Enter the Division/Unit name where the position resides in the Lottery organization.

Assigned Headquarters: Enter the physical work location where the employee will work (e.g., Sacramento Headquarters, Fresno District Office (Fresno DO), Northern Distribution Center, etc.).

Position Eligible for Telework (Yes/No):

Job Description Summary: Briefly describe the overall purpose of the position, the degree of supervision received, and any supervision exercised. Should not exceed 4 sentences. Example: Under the supervision of the Staff Services Manager I, the incumbent is responsible for …ADD THE SUMMARY OF DUTIES TO BE PERFORMED.

NOTE: To determine the level of supervision received (e.g., under direct supervision, direction, etc.), refer to the class specification or contact your C&P, Examinations Analyst.

Job Description: This will consist of 'Essential (E)' duties and 'Marginal (M)' duties (if applicable). Enter the percentage of time the incumbent will spend performing each group of essential and marginal functions (Example: A duty that is regarded as 5% is equivalent to approximately 2 hours of work per week OR 8 hours (one day) of work per month). **NOTE:** Percentages must be in descending order with the largest percentage of duties at the top. Percentages must not be less than 5% of time. Total of all percentages must equal 100%.

- Essential Functions – these duties are why the position exists. The employee must be able to perform the essential duties of the position with or without a reasonable accommodation. Ensure the duties assigned to the position are appropriate for the classification and group similar tasks together. Explain **WHAT** the task or duty is to be performed, **WHY** the task is being **WHAT GOAL** is being achieved, and **WHERE/WHEN** is the task done if relevant to the working conditions of the job.

➢ Example: **WHAT:** Meet with retailers **WHERE/WHEN:** monthly in the field at the retailer's place of business **WHY**: to determine Lottery Scratcher needs **WHAT GOAL:** and ensure supply/demand needs are met.

NOTE: Spell out acronyms. Typically, acronyms are created by a department for division/unit names or other works that are used frequently within the department. These acronyms are not well known throughout all departments within the State of CA or the public. Job applicants and/or new employees will not be familiar with these acronyms or understand their meaning, therefore, acronyms should be spelled out in duty statements (and Job bulletins).

- Marginal Functions – These are additional duties that are incidental or a minimum part of the job. These duties can be redistributed among other staff. Additionally, if you list 'Other duties as assigned', you must indicate what the other duties might entail (e.g., other duties assigned such as assisting other staff as needed, or assist with special projects as assigned, etc.) This percentage must be included in all percentages which in total cannot exceed 100%. **NOTE:** Marginal Functions should be no more than 5%.

Scope and Impact: Describe the following:

a. Consequences of Error: (Describe consequences to the department, division, etc., if the person did not perform the duties of the position.)
b. Administrative Responsibility: (Describe incumbent's role, such as activities related to personnel, training, business operations, etc.)
c. Supervision Exercised and Received: (Describe position that supervises the incumbent and classifications the incumbent supervises, or if not a supervisory classification, add 'This position does not supervise others.')
d. Internal Personal Contacts: (List frequent internal contacts to perform their duties such as, executive staff, Lottery managers and supervisors, other Lottery division staff, etc.)

Physical and Environmental Demands: (Describe the physical environment of the main work location …….

Working Conditions and Requirements: Describe the following:

a. Schedule:

b.   Travel:
c.   Other:

Effective Date: Enter the effective date of the duty statement (employee appointment date).