**Classification(s):** Information Technology Specialist II

**Working Title: Software Engineer – AWS Cloud Services**

**Position Number:** **535-210-1414-003**

**Division/Office**: **Administrative/ Information Technology Branch / Project Management Office**

**Collective Bargaining Identifier (CBID):** **R01**

**Work Week Group (WWG): E**

**Effective Date: May 3rd, 2021**

**Conflict of Interest (COI):** [ ]  **Yes**  [x]  **No**

If yes, this position is responsible for making or participating in the making of governmental decisions that may potentially have a material effect on personal financial interests. The appointee is required to complete Form 700 within 30 days of appointment, which identifies pertinent personal financial information.

**Job Description**

## Under general direction of the Chief Information Office (CIO) in conjunction with Application Development Office (ADO) Supervisor, the incumbent will work on the most complex web applications in cloud computing and data science. Incumbent must be proficient with Amazon Web Services (AWS), ASP.NET Core, Python, JavaScript, SQL, Azure DevOps. Incumbent will work on most complex information technology systems and problems. Will work independently as a high-level technical specialist. The incumbent must have a proficient knowledge of cloud computing and data science concepts, practices, methods, and principles within the Systems Development Life Cycle (SDLC) and will act in a lead capacity or work as a team member with other software engineers and represent the section at internal and external meetings supporting the Energy Commission’s Application Architecture.

## Essential Duties

50% **Application Design and Development (Software Engineering, System Engineering and Information Security Engineering Domains)**

Performs the most complex analysis, design, and programming support for all energy program divisions and offices. Implements multi-user information systems in support of the Energy Commission’s energy information needs. Develops the most complex detailed specifications that result in the applications and reports using Amazon Web Services (AWS), ASP.NET Core, Python, JavaScript, and SQL platforms. Converts business logic designs into software architecture and program code. Develops and implements test plans of programs to validate performance, business and technical requirements.

35% **Application Design and Development (Software Engineering, System Engineering and Project Management Domains)**

Performs lead duties by consulting with management and team members to properly implement the project scope, objectives and deliverables. Consults with Energy Commission and ITSB management to facilitate or lead customer meetings that define needs, discuss options and develop alternative methods to address complex applications. Provides technical support and training to other software engineers and ensures that the application architecture standards are enforced. Initiates, plans, and prepares processes and procedures for technical documents related to processes using data-flow diagram methodologies, conducting problem analysis, developing alternate solutions, and preparing comprehensive reports recommending appropriate action. Develops, monitors, and maintains mitigation, and contingency plans for complex issue resolutions regarding web application maintenance and support.

10% **Application Design and Development (Software Engineering, System Engineering Domains).**

Provides assistance to the Database Administrator (DBA) in support of SQL Server and MySQL. Designs and builds logical database structures such as: tables, indexes, views, triggers and stored procedures to identify and allocate database space requirements. Contributes to implementation of cloud data warehouse solutions including Snowflake. Monitors the database for performance and optimizes and modifies the database to provide support and maintenance. Works with Project Managers to convert the business logic and test software to provide upgrades as required. Coordinates application changes using the change control process. Keeps all application code current with the software versions of the application architecture.

## Marginal Duties

5% **Project Support, Research, Development and Troubleshooting (IT Project Management and Software Engineering Domains)**

 Communicates effectively via phone or email with the customer, ITSB managers and product line contractors/vendor(s). Documents and tracks all work and issues related to daily activities. Perform other duties as required, consistent with the specifications of the classification.

## Knowledge and Abilities

**Knowledge of:** Emerging technologies and their applications to business processes; business or systems process analysis, design, testing, and implementation techniques; techniques for assessing skills and education needs to support training, planning and development; business continuity and technology recovery principles and processes; principles and practices related to the design and implementation of information technology systems; information technology systems and data auditing; the department's security and risk management policies, requirements, and acceptable level of risk; application and implementation of information systems to meet organizational requirements; project management lifecycle including the State of California project management standards, methodologies, tools, and processes; software quality assurance and quality control principles, methods, tools, and techniques; research and information technology best practice methods and processes to identify current and emerging trends in technology and risk management processes; and state and federal privacy laws, policies, and standards.

**Ability to:** Recognize and apply technology trends and industry best practices; assess training needs related to the application of technology; interpret audit findings and results; implement information assurance principles and organizational requirements to protect confidentiality, integrity, availability, authenticity, and non-repudiation of information and data; apply principles and methods for planning or managing the implementation, update, or integration of information systems components; apply the principles, methods, techniques, and tools for developing scheduling, coordinating, and managing projects and resources, including integration, scope, time, cost, quality, human resources, communications, and risk and procurement management; monitor and evaluate the effectiveness of the applied change management activities; keep informed on technology trends and industry best practices and recommend appropriate solutions; foster a team environment through leadership and conflict management; effectively negotiate with project stakeholders, suppliers, or sponsors to achieve project objectives; and analyze the effectiveness of the backup and recovery of data, programs, and services.

## Working Conditions

Due to the COVID-19 pandemic, the majority of the duties will be performed in a telework environment, but may return to an office environment in the future. Regular and consistent attendance is essential to the successful performance in this position. Occasional travel may be required.

**Employee’s Acknowledgement:** I certify that I am able to perform, with or without the assistance of a reasonable accommodation, the essential duties of this position.

**Employee’s Name (Print):**

**Employee’s Signature**: **Date**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Supervisor’s Acknowledgment:** I certify this duty statement represents a current and accurate description of the essential functions of this position. I have discussed the duties of this position with and provided the above-named employee a copy of this duty statement.

**Supervisor’s Name (Print): Dennis Yagen**

**Supervisor’s Signature**: **Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_