

DUTY STATEMENT

TECH 052 (REV. 02/2018)

PROPOSED

RPA NUMBER (HR USE ONLY)
20-022

ALERT: This form is mandatory for all Requests for Personnel Action (RPA).

INSTRUCTIONS: Before completing this form, read the instructions located on last page.

Section A: Position Profile

A. DATE 07-28-2020	B. APPOINTMENT EFFECTIVE DATE	C. INCUMBENT NAME Vacant
D. CIVIL SERVICE CLASSIFICATION Information Technology Specialist I		E. POSITION WORKING TITLE Data Engineer
F. CURRENT POSITION NUMBER 695-540-1402-XXX		G. PROPOSED POSITION NUMBER (Last three (3) digits assigned by HR)
H. OFFICE / SECTION / UNIT / PHYSICAL LOCATION OF POSITION Office of Enterprise Technology / Data & Geospatial Services / Rancho Cordova PG1.3		I. SUPERVISOR NAME AND CLASSIFICATION Isaac Cabrera, Information Technology Manager II
J. WORK DAYS / WORK HOURS / WORK SHIFT (DAY, SWING, GRAVE) MONDAY – FRIDAY, 8:00 AM – 5:00 PM		K. POSITION REQUIRES: FINGERPRINT BACKGROUND CHECK <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO DRIVING AN AUTOMOBILE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Section B: Position Functions and Duties

Identify the major functions and associated duties, and the percentage of time spent annually on each (list higher percentages first).

	<p>Information Technology Domains (Select all domains applicable to the incumbent's duties/tasks.)</p> <p><input checked="" type="checkbox"/> Business Technology Management <input type="checkbox"/> IT Project Management <input checked="" type="checkbox"/> Client Services <input type="checkbox"/> Information Security Engineering <input checked="" type="checkbox"/> Software Engineering <input checked="" type="checkbox"/> System Engineering</p>
	<p>Organizational Setting and Major Functions</p> <p>The California Department of Technology (CDT) is focused on improving how state government develops and implements innovative solutions to meet the public's evolving needs, enrich customer experiences, and improve critical technological applications. CDT's Office of Enterprise Technology (OET) plays a critical role to enhance digital government and build a California that works for all Californians. We do this by providing foundational platforms and technology (such as GIS/Open Data, Web Portals, Software Engineering and Open Source code curation) for organizations to provide innovative digital services.</p> <p>Under the direction of the Information Technology Manager II (ITM II) over Data and Geospatial Services, the Information Technology Specialist I (IT Spec I) serves as Data Engineer performing a variety of data engineering and data maintenance tasks and activities. The IT Spec I will be responsible for data engineering support for both internal and external customers. The IT Spec I works with cross-functional teams and business programs to analyze their business problems and assist with all parts of Data Warehouse reporting systems including Extract, Transform and Load(ETL) tools and processes, Data modeling, Reporting for end users, and data pipelines. Additionally, the IT Spec I will plan, organize and facilitate various communities of practice which enable the state's greater technology community and business programs to share knowledge and best practices, ask questions of their colleagues, and directly engage on high priority topics.</p>
<p>% of time performing duties</p> <p>55%</p>	<p>Essential Functions (Percentages shall be in increments of 5, and should be no less than 5%.)</p> <p>Data Engineering</p> <ul style="list-style-type: none"> • Design, develop and maintain optimal data pipeline architecture • Design and develop end-to-end ELTs / ETLs based on business needs • Assemble large, complex data sets that meet business requirements. • Identify, design, and implement internal process improvements: automating manual processes, optimizing data delivery, re-designing infrastructure for greater scalability, etc. • Build processes supporting data transformation, data structures, metadata, dependency and workload management. • Frame and breakdown complex problems into key components, design solutions and data analysis tools to derive insights, and recommend practical solutions to achieve results • Perform numerical analysis, data cleansing, energy data modeling, and data visualization • Implement data transforms and organization for various data stores (data lakes, Databases and data warehouses)

% of time performing duties

20%

Data Systems Support / Maintenance

- Independently manage the quality and integrity of data and data solutions, including data lakes, databases and data warehouses.
- Independently automate data intake, storage and distribution solutions at scale.
- Independently manage, monitor, maintain and provide support for data systems and environments.
- Independently perform data cleansing, data scrubbing and normalization.
- Independently perform audits of data use, practices and solutions.
- Independently manage and maintain user access to data systems.

10%

Client Services

- Work directly with product owners and users to build and evaluate business cases to support product investment decisions.
- Independently development, execution and maintenance of test plans, test scenarios, and test cases.
- Collaborate with the business and development teams to troubleshoot and resolve defects and other related issues.
- Facilitate the defect management and triage process for assigned projects.
- Independently plan and facilitate meetings.

10%

Training Services

- Lead the development of knowledgebase, training outlines, user guides, and other training material for Data Engineering software tools and utilities.
- Organize and conduct user training, overseeing the delivery of training to clients, CDT staff and Data and Geospatial Services staff.
- Independently evaluate outcomes to ensure that trained staff have sufficient knowledge and skill to properly use the software tools and utilities.

5%

Marginal Functions (Percentages shall be in increments of 5, and should be no more than 5%.)

Other related duties as required.

Work Environment Requirements

- During state emergencies or activation by the California Office of Emergency Services, incumbents may be asked to work extended hours, 12-hour shifts, and/or off-site and occasionally out-of-town.
- May be required to carry and use a cell phone or mobile device.
- May occasionally be required to work some weekends.
- May occasionally be required to work outside of normal business hours.
- May occasionally be required to travel between Rancho Cordova and Sacramento.

Allocation Factors (Complete each of the following factors.)

Supervision Received:

The IT Specialist I receives direction from the IT Manager II.

Actions and Consequences:

The IT Spec I should have a thorough understanding of the responsibilities and duties of this position and also a broad understanding of the mission and goals of the OET. Poor decisions, judgments, and recommendations in the areas above could result in dissatisfaction of partners and the inability for products to function.

Personal Contacts:

The IT Spec I has regular contact with various California departments, agencies and their executive leadership and project staff, the California Government Operations Agency, CDT executives, leadership and project staff, and consultants.

Administrative and Supervisory Responsibilities (Indicate "None" if this is a non-supervisory position.)

None

Supervision Exercised:

This level does not supervise but may lead. The IT Spec I has defined responsibility and authority for decision making related to projects or in an advisory function.

Other Information

The IT Spec I should have knowledge of data engineering and data engineering tools, methodologies and techniques and maintain predictable attendance. Additionally, the incumbent should possess the following knowledge, skills, and/or abilities:

Knowledge of:

- Information technology systems (software) programming, equipment; capabilities and interfaces between hardware and software.
- Requirements for the installation and implementation of complex information technology software systems.
- Principles of public administration, organization, analytical techniques and technical report writing; methods to conduct research, analyze and evaluate information, develop studies and prepare reports.
- State and CDT rules, regulations, policies, practices, and reporting criteria.

Ability to:

- Conceive and portray the big picture; creatively think outside the box with the ability to power through challenges in pursuit of a solution.
- Apply creative thinking in the design and development of methods of processing information with information technology systems.
- Conceptualize database optimization.
- Conceptualize data presentation.
- Analyze information and situations, data and complex business systems, identify problems, reason logically and creatively, draw valid conclusions, and develop effective solutions.
- To learn emerging technologies that may become necessary to support the organization's business and long term strategic plan, e.g. customer relationship management and project portfolio management.
- Pay attention to detail, achieve thoroughness and accuracy when accomplishing a task.
- Manage workload of multiple assignments at a time.

Desirable Qualifications: (List in order of importance.)

- Bachelor's Degree in Computer Science, Information Technology, Statistics, Mathematics, Engineering or a quantitative discipline is desired.
- Knowledge/experience with data engineering principles.
- Experience or education in one or more of the following technologies: SQL / SQL, RDBMS, SQL Server, Oracle, PostgreSQL, ETL / ELT, Data Lakes, Data Warehouses and Enterprise Metadata Management Systems.
- Experience with Azure Data Factor, Amazon Glue / Lamda, FME, 5TRAN, Matillion
- Knowledge and experience with Data Warehouse concept and architectures, Online Analytical Processing (OLAP) technologies, Star-schema, Snowflake schema and Aggregation etc.
- Experience building end-to-end data solutions using Data models, Data pipelines and BI products.
- Experience or education of programming in one or more of the following languages: C#, Java, SQL, R, Python.
- Experience producing requirements documents, systems architecture and interfaces, data model diagrams, configuration management documents etc.
- Ability to conceive and portray the big picture; creatively think outside the box with the ability to power through challenges in pursuit of a solution.
- Excellent communication and customer service skills, including the ability to present ideas and information effectively, both orally and in writing.
- Knowledge of project management best practices.
- Ability to critical think and approach problems with creatively while using a variety of analytical techniques to resolve said problems.

- Knowledge of principles of public administration, organization, analytical techniques and technical report writing; methods to conduct research, analyze and evaluate information, develop studies and prepare reports.
- Knowledge of state and CDT rules, regulations, policies, practices, and reporting criteria.
- Ability to apply creative thinking in the design and development of methods of processing information with IT systems.
- Ability to analyze information and situations, data and complex business systems, identify problems, reason logically and creatively, draw valid conclusions, and develop effective solutions.
- Ability to learn emerging technologies that may become necessary to support the organization's business and long-term strategic plan.

INCUMBENT STATEMENT: I have discussed the duties of this position with my supervisor and have received a copy of the duty statement.

INCUMBENT NAME (PRINT)	INCUMBENT SIGNATURE	DATE
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SUPERVISOR STATEMENT: I have discussed the duties of this position with the incumbent.

SUPERVISOR NAME (PRINT) Isaac Cabrera	SUPERVISOR SIGNATURE	DATE
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