

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Research Data Analyst II	OFFICE/BRANCH/SECTION Data Science Branch - HQ Division of Data and Digital Services	
WORKING TITLE Data and Digital Services Data Analyst	POSITION NUMBER 900-064-5731-604	REVISION DATE 09/18/2026

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under general supervision of the Research Data Supervisor II (Data Science Branch Manager), the incumbent dependently performs a variety of tasks including data analysis and visualization. The incumbent works collaboratively with a variety of teams and staff at Caltrans to develop data products, create data visualizations/maps and dashboards, and perform statistical analysis to address key departmental business questions. The incumbent is expected to solicit and incorporate user feedback, develop and update data products in an iterative and agile manner using version control (GitHub) and statistical/data science tools (mainly Python). The incumbent assists in the development of performance metrics and data products for use across Caltrans, as well as the development and maintenance of data infrastructure and tools to support these products. Some of these data products may be public-facing, including datasets hosted on the Caltrans Open Data Geoportal and visualizations/dashboards hosted on the DDS Analysis Portfolio webpage. The DDS RDA II also is expected to provide and develop subject matter expertise on a variety of position-related subjects, including but not limited to transit data standards (GTFS, GTFS-RT, TIDES, CAD-AVL, etc.), and planning matters. The incumbent is a member of the Data Science Branch comprised of additional Analysts and Specialists and will be expected to work collaboratively in two-week agile sprint sessions.

CORE COMPETENCIES:

As a Research Data Analyst II, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- Learning on the Fly:** Learns quickly, is open to change, experiments, and is flexible. (Prosperity - Innovation, Integrity)
- Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Prosperity - Innovation)
- Reliability:** Ability to demonstrate dependability in meeting commitments, and providing a consistent work product. Takes responsibility for individual actions in order to meet deadline demands. (Employee Excellence - Collaboration, Integrity)
- Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Prosperity - Innovation, Integrity)
- Relationship Building:** The ability to develop and maintain internal and external trust and professional relationships, which includes listening and understanding to build rapport. (Equity, Employee Excellence - Collaboration, Equity)
- Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Employee Excellence - Collaboration, Equity)
- Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Equity, Employee Excellence - Collaboration, Equity)
- Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Prosperity - Innovation)
- Diagnostic Information Gathering:** Identify information needed to clarify a situation, seeking that information from appropriate sources. (Climate Action - Collaboration, Innovation)

TYPICAL DUTIES:

Percentage
Essential (E)/Marginal (M)¹ Job Description

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45%	E	• Establishes work plans, develop roadmaps, and monitor the progress of analysis tasks to ensure timely completion of defined objectives. • Gathers raw or intermediate data from open data sources, cloud databases, or on-premises databases and systems within an enterprise environment while following data governance and security protocols and best practices. • Uses programming languages and software programs such as Python, SQL, ArcGIS Pro, Metabase, and Microsoft Excel to import, clean, analyze, and present data. • With guidance, researches, identifies, analyzes, predicts, and interprets trends or patterns in complex datasets to support decision making and policymaking, both by Caltrans management and external partners. • Performs statistical analyses to test research hypotheses. Use outcomes to formulate conclusions and recommendations. • Internally documents in-progress and completed analyses using appropriate version control tools, such as GitHub. • Iterates upon data cleaning and analytics workflows to parameterize, automate, and support reproducibility.
35%	E	• Collaborates with data users and Caltrans team members to create data visualizations, maps, dashboards, and reports for internal and external clients. • Visualizes and summarizes quantitative and qualitative data to effectively communicate key insights that help client departments understand and interact with mobility data. • Documents and presents analysis results to management and customer stakeholders verbally and in writing. Write reports in a professional, well-organized, and accessible format. Customizes presentations and reports depending on the technical expertise of the audience. Explains the data analysis, trends, and results. Uses outcomes to substantiate conclusions, program and policy strategy, and recommendations. • Iterates upon reporting/presentation workflows to parameterize, automate, and support reproducibility.
15%	E	• Consults with other Caltrans divisions including Traffic Operations, Safety, Asset Management, as well as those in Planning and Modal Programs and the Transit and Rail Program to identify needs, develop analyses supporting research/business questions, and adjust analyses in response to stakeholder feedback. • Designs, develops, and administers data collection instruments. Works with the team to identify audience, outreach strategies, form fields and domains, database design and compilation workflow. Organize, analyze and interpret results based on submitted data. • Facilitates and presents findings at meetings on analytical topics, consult with other Caltrans teams, and serve as a subject matter expert on multidisciplinary teams.
5%	M	Performs other job related duties within the scope of the classification as assigned.

¹ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned.
MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others.

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS
None.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS
Knowledge of: Data analysis methods and techniques including the gathering and collection of structured and unstructured data, as well as general principles, concepts and terminology used in research; trend analysis; practices and procedures required to ensure and maintain data security; problem-solving techniques and processes to identify and resolve issues related to the completion of work assignments; exploratory data analysis; statistical analysis techniques and methods; time management techniques to provide for efficient prioritization and completion of projects and assignments; software such as R, Python, SQL, and Microsoft Excel to prepare spreadsheet summaries, reports, charts, and tables; version control tools and techniques; and knowledge of departmental policies and procedures.

Ability to: Query, mine, compile, analyze, and manipulate data; prepare research and statistical reports; analyze written and numerical data regarding general governmental business needs; manage revisions/iterations of ongoing analyses; communicate effectively both orally and in writing to individuals and groups related to the area of research; present ideas and information effectively; design and validate studies and analyze the accuracy of data collected; analyze quantitative and qualitative data to reach sound conclusions and/or make recommendations; identify improvements and originate new solutions to problems; identify required data, information, materials, and resources needed to complete/perform a project; reason logically and creatively, and

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use a variety of analytical techniques to resolve or provide information regarding complex research and data problems; consult with and advise administrators or other interested parties on a wide variety of subject-matter areas; recognize when issues, activities, and/or decisions need to be elevated to management, and communicate information effectively to others; manage a workload consisting of multiple projects and assignments; complete work under critical timelines to meet project objectives and deadlines; and be objective and flexible to adapt to changes in priorities and work assignments.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The selected candidate implements assigned tasks based on guidelines furnished by their supervisor. The incumbent has responsibility for validating raw data and checking the accuracy and timeliness of their analytical work product. The incumbent is also responsible for determining the most effective or efficient way to clean and analyze data. The consequences of error could result in invalid departmental decisions based on erroneous analyses or conclusions. Continuing to publish or use data of poor quality has downstream effects on internal/external customers and stakeholders. Additionally, improper analysis of data could result in unnecessary work or inefficiency, which is a cost to the Division and Department.

PUBLIC AND INTERNAL CONTACTS

The DDS RDA II works with a team of other Data Analysts and Specialists. The Data Science Branch is part of the Office of Data in the HQ Division of Data & Digital Services. The selected candidate works with Caltrans HQ staff including those in Traffic Operations, Safety, and other Divisions in Planning and Modal Programs and the Transit and Rail program. The selected candidate may be in contact with a variety of people outside Caltrans (including DDS contractors, transit agencies, local DOTs, MPO staff, etc.) via email, phone, and videoconference. At times, attendance of conferences may be required as well.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

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- Have the ability to work on a keyboard; function with manual dexterity; stay in the stationary position for long periods; focus for long periods of time;
 - Be able to transport;
 - Be able to develop and maintain cooperative relationships;
 - Be able to perform tasks utilizing a personal computer;
 - Have the ability to multi-task, adapt to changes in priorities, and complete tasks or projects in short notice;
 - Be able to concentrate for long periods in order to review and create documents;
 - Be open to change and new information; adapt behavior and work methods in response to new information, changing conditions, or unexpected obstacles.
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WORK ENVIRONMENT

The incumbent works in front of a dual-monitor computer system under artificial light in an office setting with long periods of working in a sitting or standing position.

This position may be eligible for telework. The amount of telework is at the discretion of the Department and based on Caltrans' evolving telework policy. Caltrans supports telework, recognizing that in-person attendance may be required based on operational needs. Employees are expected to be able to report to their worksites with minimum notification if an urgent need arises. The selected candidate will be required to commute to the headquartered location as needed to meet operational needs. Business travel may be required. Reimbursement considers an employee's designated headquartered location and primary residence, and may be subject to CalHR regulations or applicable bargaining unit contract provisions. All commute expenses to the headquartered location will be the responsibility of the selected candidate.

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I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

EMPLOYEE (Print)

EMPLOYEE (Signature)	DATE
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I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

SUPERVISOR (Print)

SUPERVISOR (Signature)	DATE
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