

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Research Data Specialist II	CalSTA Transit and Rail Team	
WORKING TITLE SB125 Transit Data Scientist	POSITION NUMBER	REVISION DATE

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

Under general supervision, the CalSTA SB125 Transit Data Specialist (RDS II) will independently perform a variety of tasks including data management, complex research development and execution, data analysis/visualization, and reporting on policy impacts and actions to take. The RDS II will lead collaboration with a variety of teams inside and outside CalSTA and the Caltrans Division of Data & Digital Services, translating transit policy into data products with plans for ongoing maintenance and iteration. The RDS II will independently seek and incorporate user feedback, develop and update products in an iterative and agile manner using version control (Github) and statistical/data science programming tools (mainly Python). The RDS II will lead the development of SB125-related data collection, performance metrics and data products for statewide use. The RDS II will be the technical lead for public-facing transit analytics products, including data hosted on the Caltrans Open Data Geoportal or web-hosted visualizations/dashboards supporting the implementation of SB125 and related initiatives by Caltrans including the California Integrated Mobility Program. The RDS II will be part of a community of practice with other data analysts and provide peer support for their work as requested.

CORE COMPETENCIES:

As a Research Data Specialist 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.

- **Change Leadership:** Develops new and innovative approaches needed to improve effectiveness and efficiency of work products. Encourages others to value change. Considers impact and recommends changes. (Strengthen Stewardship and Drive Efficiency - Innovation)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Cultivate Excellence - Engagement)
- **Initiative:** Ability to identify what needs to be done and doing it before being asked or required by the situation. Seeks out others involved in a situation to learn their perspectives. (Enhance and Connect the Multimodal Transportation Network - Equity)
- **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. (Enhance and Connect the Multimodal Transportation Network - Innovation)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Strengthen Stewardship and Drive Efficiency - Engagement, Equity, Pride)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Enhance and Connect the Multimodal Transportation Network - Pride)
- **Interpersonal Effectiveness :** Effectively and appropriately interacts and communicates with others to build positive, constructive, professional relationships. Tailors communication style based on the audience. Provides and is receptive to feedback. (Lead Climate Action - Engagement)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Enhance and Connect the Multimodal Transportation Network - Innovation)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Enhance and Connect the Multimodal Transportation Network - Innovation)

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
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40%	E	Lead creation of data visualizations, maps, dashboards, and reports for internal and external partners. Visualize and summarize quantitative and qualitative data to effectively communicate key insights that help client departments effectively understand and interact with mobility data. Document and present analysis results to management and customer stakeholders verbally and in writing. Write reports in a professional, well-organized and accessible format. Customize presentations and reports depending on the technical expertise of the audience. Explain the data analysis, trends and results including implications for actions. Use outcomes to substantiate conclusions, program and policy strategy and recommendations. Iterate upon reporting/presentation workflows to parameterize, automate, and support reproducibility. Facilitate and present findings at meetings on analytical topics, consult with CalSTA/Caltrans teams, and serve as a subject matter expert on multidisciplinary teams.
30%	E	Establish analysis plans and monitor the technical progress of research activities to ensure timely completion of defined objectives. Design, develop and administer data collection or compilation/cleaning workflows. Lead identification of audience, outreach strategies, and data structures (as applicable). Adapt priorities as needed. Consult with other stakeholders to identify needs, develop analyses supporting research/business questions, and adjust analyses in response to stakeholder feedback. Internally document in-progress and completed analyses using appropriate version control tools. Iterate upon data cleaning and analytics workflows to parameterize, automate, and support reproducibility.
25%	E	Gather raw or intermediate data from open data, cloud databases, or on-premises databases and systems within an enterprise environment while following data governance and security guidelines. Use software programs or languages such as Python, SQL, ArcGIS, or Microsoft Excel to import, prepare and analyze data. Independently research, identify, analyze, predict, and interpret trends or patterns in complex data sets to support internal and external partner stakeholders. Perform statistical analyses to test research hypotheses. Use outcomes to formulate conclusions and recommendations.
5%	M	Perform other 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

No supervision duties. Guidance is given on technical matters to more junior data analysts and scientists.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of: Data analysis methods and techniques including gathering and collection of structured and unstructured data, as well as general principles, concepts and terminology used in data science; trend analysis procedures; practices 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; advanced mathematical techniques and descriptive 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 or techniques; and CalSTA policies and procedures. Knowledge of transit data and relevant state/federal policies.

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 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

Responsible for delivering data science projects to CalSTA to inform planning and transit policy, with review from supervisor. The RDS II has responsibility for validating data, checking the accuracy and timeliness of their analytical work product, determining the most effective or efficient way to clean and analyze data. The RDS II is also responsible for peer review of other analyses as

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requested by CalSTA. 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 Agency.

PUBLIC AND INTERNAL CONTACTS

The RDS II will work with a team of other Data Specialists at CalSTA, with close cooperation with the Caltrans HQ Division of Data & Digital Services. The incumbent will work with CalSTA, Caltrans HQ staff including those in Rail or other Divisions in Planning and Modal Programs; they may be in contact with a variety of people outside Caltrans (including state agencies such as CARB, 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

- Have the ability to work on a keyboard; function with manual dexterity; sit/stand for long periods; focus for long periods of time;
- Be able to bend, stoop and kneel;
- 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.

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 Agency and based on CalSTA's evolving telework policy. CalSTA 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 incumbent 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.

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.)

EMPLOYEE (Print)

EMPLOYEE (Signature)

DATE

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

SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE