



Exhibit-C

Data Scientist - DRAFT

Class Code	FLSA Status	EEO-CAT	Represented Status	Salary Grade	Effective Date	Resolution #
TBD	Exempt	4-Professionals	AFSCME	10	12/11/2024	24-XXX

DEFINITION: Under general direction, gathers, synthesizes, analyzes, and generates information summarizing business, operational, financial, or economic data to inform strategic decisions through the application of algorithms, machine learning, predictive models, data mining, and exploratory data analysis; performs advanced analytics, hypothesis testing, and data extraction; conceptualizes and visualizes the data in an appropriate and relevant manner that is understandable for stakeholders.

REPRESENTATIVE FUNCTIONS may include, but are not limited to the following:

- Collects and analyzes statistics and information from multiple data sources to identify trends and extract data insights to improve service delivery; communicates informed conclusions and recommendations to key stakeholders.
- Perform exploratory data analysis, data mining, data cleaning processes and transform raw data into usable formats and critical insights to support business decisions.
- Recommend and utilize methodologies and best practices for advanced analytics, hypothesis testing, statistical sampling design and methods; ensure compliance with sampling, reporting and data methodologies.
- Recommend and utilize data quality assurance and controls to monitor statistical data outliers and ensure reliable and accurate datasets for use across district departments.
- Analyzes, and reviews various data streams and utilization of big data to create algorithms and predictive models supporting district data initiatives.
- Research, formulate, and train machine learning and deep learning models for statistical and exploratory analysis of structured and unstructured data.
- Implement new statistical or mathematical methodologies; evaluate model performance and iterate to improve accuracy.
- Drives the collection of new data and the refinement of existing data sources; designs and builds new data set processes for modeling, data mining, and production purposes; finds and recommends new uses for existing data sources.
- Research novel technologies and analytical methods across data science, statistics, and data visualization, to foster innovation and provide business solutions.
- Works with cross departmental teams to develop methodologies in defining key performance indicators, metrics, guidelines, and strategies for effective use of algorithms and data.
- consults with external organizations to gather data and information, provide data analysis and interpretation as needed.
- Assists and supports the District's Strategic Plan and Initiatives through efficient and effective use of data and business intelligence platforms to convey data insights and statistical information to the public and District staff
- Utilizes artificial intelligence (AI) and machine learning (ML) tools and concepts to create tools for data-driven decision-making to become accessible, understandable, and actionable for non-technical users.
- Creates queries utilizing disparate data sources to drive solutions, such as analytical reports and business intelligence dashboards.
- Performs cost-benefit and return on investment (ROI) analyses for proposed changes to aid management in making implementation decisions.
- Queries database repositories, synthesizes and visualizes trend data; prepares statistical charts, and other documents to accompany studies, reports, and presentations.
- Responds orally and in writing to requests from the public, District staff, governmental agencies, advisory committees, and community groups, for information regarding data visualizations, reports, models, and dashboards as assigned.



Alameda Contra Costa Transit District Classification Specification

Data Scientist

- May assist higher-level staff in the areas of research, data collection, data analysis, report writing, and preparation for the more complex, studies and projects.
- Attends and participates in a variety of professional meetings and regulatory training; stays abreast of new trends, innovations, laws, and regulations as they relate to the field of data science, business intelligence and analytics.
- Prepares complex reports, manuals, memos, correspondence, and other documents. May deliver presentations to the Board of Directors or District stakeholders as needed.
- Performs related duties as required.

Knowledge of: Principles and practices of business analytics, data mining, advanced statistical modeling and analysis methods, advanced data visualization techniques and best practices; application of variety of data science tools and machine learning framework, building and implementing predictive models; running simulations; principals and practice of research methods, survey design and statistical sampling methodology; design and development in modern business intelligence tools; principles, concepts; principles and practices of program and project management, developing scopes of work, budgets, and timelines; principles and techniques of conducting research and analytical studies, evaluating alternatives, and making sound recommendations; statistical programming libraries and advance database queries; probability and statistics, distributions, hypothesis testing, p-value, statistical significance; map/reduce framework; A/B testing, causal impact; time series analysis; proficiency in English usage, grammar, spelling, vocabulary, and punctuation; principles and procedures of record-keeping, technical report writing, and preparation of correspondence and advanced levels of presentation; modern office practices and methods, including computer equipment and software programs relevant to work performed; pertinent District functions, policies, rules, and regulations; techniques for providing a high level of customer service by effectively working with the public, vendors, contractors, and District staff

Ability to: Apply knowledge of statistics, exploratory data analysis, machine learning, programming, statistical and predictive modeling, simulation, and advanced mathematics to recognize patterns, identify opportunities, pose business questions, and transform raw data into critical insights to promote data culture and inform data-driven decisions; Analyze, interpret, summarize, and present technical information and data for immediate, short and long-range service enhancements in an effective manner, including socio-economic forecasts, demographic analyses; interpret, apply, explain, and ensure compliance with federal, state, and local laws, codes, and regulations, and District policies and procedures; conduct cost/benefit, impact and other related technical analyses; meet deadlines; prepare written technical reports and performance documentation materials; communicate in a clear, concise, persuasive, and tactful manner to a wide variety of audiences both orally and in writing; effectively participate in a variety of outreach activities; effectively advocate and promote the use of public transit; keep abreast of current trends in the field; exercise sensitivity to socioeconomic and cultural issues; work effectively and tactfully with people on sensitive problems involving divergent viewpoints; maintain effective working relationships with District staff, governmental officials, advisory committees, and community groups using principles of excellent customer service.

Education: Equivalent to a bachelor's degree from an accredited college or university with major coursework in mathematics, statistics, data science, business analytics, operations research machine learning, information systems, computer science, business administration, or a closely related field.

Experience: Five (5) years of progressively responsible experience in data science, business analytics, business intelligence, advanced data mining and analysis, statistical predictive modeling, and software applications. Additional education, such as a graduate degree in one of the above disciplines from an accredited college or university may be substituted for experience on a year-for-year basis.

License/Certification(s): None.



Alameda Contra Costa Transit District Classification Specification

Data Scientist

Physical Requirements: (1) Must maintain the physical ability necessary to perform tasks in an office setting, operating computers, keyboards, and other peripheral equipment. (2) Must maintain the physical mobility necessary to transport oneself to various locations throughout the District.

Special Requirements: None.

Established Date:

Revision Date: