Data Scientist

CLASS TITLE	CLASS CODE	SALARY GROUP	SALARY RANGE
DATA SCIENTIST I	0660	B28	$88,191 - $149,155
DATA SCIENTIST II	0662	B30	$106,712 - $180,475

GENERAL DESCRIPTION

Performs data science work involving gathering, analyzing, and managing large data sets to guide key business decisions and model various market conditions to provide information for special projects or reports. Also involves designing and constructing new processes for data modeling and production using prototypes, algorithms, predictive models, and custom analysis.

EXAMPLES OF WORK PERFORMED

Develops and manages predictive modeling algorithms to mine large data sets in order to make business decisions and discover solutions to business problems.

Develops and implements databases, data collection systems, data analytics, and other strategies that optimize statistical efficiency, accuracy, and quality.

Develops data quality measures, analyzes data quality results, and implements necessary changes to ensure data quality improvement.

Gathers, cleans, process, compiles, and queries raw data.

Codes programs to automate data collection and processing and to use for statistical modeling and graphic analysis; builds data visualization tools, dashboards, and reports.

Researches and applies knowledge of existing and emerging data science principles, theories, and techniques to inform business decisions; and researches analytics products to develop new or improved predictive modeling products.

Identifies and adopts best practices in reporting and analysis: data integrity, design, analysis, validation, and documentation.

Prepares concise, comprehensive technical reports to present and interpret data, identify alternatives, and make and justify recommendations on data revisions.

Conducts in-depth investigations into business problems to identify trends and potential improvements.

Administers project planning techniques to divide projects into tasks and ensure that deadlines are met.

Quantifies the potential value of a new data set for future models and models accuracy over baselines for data sets.

May serve as a subject matter expert on data integrity, extraction, and compilation.

Performs related work as assigned.

DESCRIPTION OF LEVELS

Employees in levels I and II may serve in lead or supervisory roles overseeing or managing agency data science functions, or as subject matter experts.

Factors that may distinguish between levels include the scope of responsibility, oversight, and authority; the complexity of the work performed; the scope, nature, and impact of the assigned projects; and the employee's related experience, education, and certifications.

DATA SCIENTIST I: Performs highly complex (senior-level) data science work. Works under limited supervision, with moderate latitude for the use of initiative and independent judgment.

DATA SCIENTIST II: Performs advanced (senior-level) data science work. Works under minimal supervision, with extensive latitude for the use of initiative and independent judgment.

GENERAL QUALIFICATION GUIDELINES

EXPERIENCE AND EDUCATION

Experience in data science, predictive modeling, and algorithm work. Graduation from an accredited four-year college or university with major coursework in data science, business analytics, computer science, computer information systems, management information systems, accounting, finance, mathematics, statistics, economics, or a related field is generally preferred. Experience and education may be substituted for one another.

KNOWLEDGE, SKILLS, AND ABILITIES

For all levels

- Knowledge of local, state, and federal laws and regulations relevant to data science and data governance; data modeling techniques and algorithms; statistics and analyzing data sets; artificial intelligence; visualization techniques; running queries, report writing, and presenting findings; database design development, data mining, and segmentation techniques; computer programming languages; and record keeping, including security procedures for handling, protecting, and distributing confidential data.

- Skill in the use of a computer and applicable software; in analyzing problems and devising effective solutions; in conducting data searches; in evaluating and translating large amounts of data; in programming; and in critical thinking.

- Ability to manage and manipulate large data sets; to provide advanced analysis and interpret moderate to complex concepts; to manage projects and prepare reports; to maintain accuracy and attention to detail; to code, test, and debug software; to communicate effectively; and to supervise the work of others.