

Iowa Department of Administrative Services – Human Resources Enterprise  
Job Classification Description

## Data Analyst 2

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### Definition

Performs moderately complex data analyses, including both descriptive and diagnostic analytics, to identify trends, patterns, and relationships within large datasets; creates advanced visualizations, automates processes, and collaborates with other teams to address business needs; operates with moderate supervision and exercises some degree of autonomy in task execution; performs related work as required.

*The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.*

### Work Examples

Integrates data from multiple sources, ensuring accuracy and consistency for analysis.

Performs deeper analyses, such as trend analysis, correlation analysis, and root cause analysis to understand underlying factors.

Uses statistical techniques to test hypotheses and draw conclusions from the data. Calculates descriptive statistics, conducts hypothesis tests, and performs regression analysis, as needed.

Develops automated data workflows and report generation processes to improve efficiency.

Creates dynamic dashboards and interactive reports to communicate insights effectively.

Works with cross-functional teams to gather data requirements and provide insights for decision-making.

Stays abreast of new tools, techniques, and best practices in data analytics; actively participates in continual learning courses and training sessions to enhance skill sets.

Ensures and maintains data security and compliance with privacy regulations; handles sensitive information with care.

Assists with the identification/selection of key performance indicators for the agency; works with stakeholders to identify opportunities for using data analysis to enhance agency performance.

Contributes to solving complex business problems by designing and conducting ad-hoc analyses; applies a data-driven approach to address specific questions posed by agency leaders.

### Competencies Required

#### Knowledge:

- Customer Service – Principles and processes for providing customer services, including customer needs assessment, meeting quality standards for services, and evaluating customer satisfaction.
- English Language – The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.

- Administration and Management – Business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Computers and Electronics – Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- Education and Training – Principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
- Clerical – Administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

**Abilities:**

- Written Comprehension – Read and understand information and ideas presented in writing.
- Written Expression – Communicate information and ideas in writing so others will understand.
- Speech Clarity – Speak clearly so others can understand.
- Speech Recognition – Identify and understand the speech of another person.
- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning – Combine pieces of information to form general rules or conclusions.
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.
- Information Ordering – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Oral Expression – Communicate information and ideas in speaking so others will understand.
- Flexibility of Closure – Identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
- Category Flexibility – Generate or use different sets of rules for combining or grouping things in different ways.
- Originality – Come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

**Skills:**

- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

- Reading Comprehension – Understanding written sentences and paragraphs in work related documents.
- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Speaking – Talking to others to convey information effectively.
- Writing – Communicating effectively in writing as appropriate for the needs of the audience.
- Mathematics – Using mathematics to solve problems.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Systems Evaluation – Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- Coordination – Adjusting actions in relation to others' actions.
- Time Management – Managing one's own time and the time of others.
- Active Learning – Understanding the implications of new information for both current and future problem-solving and decision-making.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Monitoring – Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

## **Minimum Qualification Requirements**

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) Six years of full-time work experience in business/data/statistical analytics, economic research, or data science.
- 2) Graduation from an accredited four-year college or university with a degree in business analytics, economics, data science, statistics, mathematics, management information systems, or industrial management, and experience equal to two years of full-time work (as described in number one).
- 3) All of the following (a and b):
  - a. A total of four years of education and/or full-time experience in business/data/statistical analytics, economic research, or data science, where thirty semester hours of accredited college or university coursework in business analytics, economics, data science, statistics, mathematics, management information systems, or industrial management equals one year of full-time experience; and
  - b. A total of two years of graduate-level education and/or full-time experience (as described in part a), where twenty-four semester hours of accredited graduate college or university coursework in business analytics, economics, data science, statistics,

mathematics, management information systems, or industrial management equals one year of full-time experience.

- 4) All of the following (a and b):
  - a. A total of four years of education and/or full-time experience in business/data/statistical analytics, economic research, or data science, where thirty semester hours of accredited college or university coursework in any field equals one year of full-time experience; and
  - b. Graduation from an accredited college or university with a Master's degree in business analytics, economics, data science, statistics, mathematics, management information systems, or industrial management.
- 5) All of the following (a, b, and c):
  - a. Two years of full-time work experience in business/data/statistical analytics, economic research, or data science; and
  - b. A total of four years of education and/or full-time experience (as described in part a), where thirty semester hours of accredited college or university coursework in any field equals one year of full-time experience.
  - c. Possession of a professional certificate in data science, business analytics, or data analytics.
- 6) Current, continuous experience in the state executive branch that includes eighteen months of full-time work as a Data Analyst 1.

*Effective date: 12/25 KC*