

CompTIA

# DataX

CompTIA DataX is the premier certification for highly experienced professionals seeking to validate competency in the rapidly evolving field of data science.

## Demonstrate Data Science Mastery with CompTIA DataX

- **Stay Committed to Continuous Learning.** DataX provides a framework for solidifying your comprehensive understanding of advanced-level data tools and concepts, empowering you to advance your career.
- **Evaluate On-the-Job Skills.** DataX covers a wide range of topics, including mathematics and statistics, machine learning, operations and processes, and specialized applications of data science. It ensures you have a holistic understanding of the field and are well-equipped to handle diverse data science tasks and challenges.
- **Demonstrate Advanced-Level Competency.** DataX is more than just a certification, it is a testament to your commitment to excellence in the field of data science. It validates your technical skills and demonstrates your expertise in handling complex data sets, implementing data-driven solutions and driving business growth through insightful data interpretation.

**DataX represents the latest and greatest in data science.** DataX is the premier certification on the market for validating vendor-neutral data science skills with hands-on, performance-based questions on the certification exam. It confirms your advanced-level knowledge and ensures you have the core skills necessary to manipulate data and extract meaning and generate actionable insights. The CompTIA DataX certification exam will certify the successful candidate has the knowledge and skills required to:

- Understand and implement data science operations and processes.
- Apply mathematical and statistical methods appropriately and understand the importance of data processing and cleaning, statistical modeling, linear algebra and calculus concepts.
- Apply machine-learning models and understand deep-learning concepts.
- Utilize appropriate analysis and modeling methods and make justified model recommendations.
- Demonstrate understanding of industry trends and specialized data science applications.



Exam #

DY0-001

Release Date

Mid 2024

Languages

English

CE Required?

Yes

With over 3 million certifications granted in key tech domains, CompTIA's credentials reliably indicate professional competence.

## How does CompTIA DataX compare to alternatives?

While there are other offerings in the market such as academic certificate programs, non-academic certificate programs and data science certifications, none provide the same combination of flexibility, industry recognition, vendor-neutrality, and rigor that DataX does.

DataX was developed to fit a need in the industry, therefore, there are currently no direct competitor certifications. Its closest competitors are academic certificate programs.

Learn more about the differences between certifications and certificates.

		MIT   xPRO Professional Certificate in Data Science and Analytics	UCLA Extension Data Science Certificate
<b>Certification or Certificate Program</b>	<b>Certification</b>	Academic Certificate Program	Academic Certificate Program
<b>Vendor Neutral?</b>	Yes	Yes	Yes
<b>Experience Level</b>	Advanced	Intermediate	Intermediate
<b>Focus</b>	Validates expert-level knowledge and a comprehensive understanding of critical data tools and concepts	Data science fundamentals, foundational and advanced AI/ML concepts	Data management and visualization, machine learning, statistical models
<b>Training</b>	Diagnostic pre-test to assess exam readiness, simulated and live hands-on labs	Online	In-person or online
<b>Prerequisites</b>	5+ years of experience in data science or a similar role	Familiarity with Excel datasets, data visualization, and basic knowledge of Python coding recommended	Prior programming, statistics, or data analytics knowledge
<b>Length to Complete</b>	Flexible	6 months, online	6-24 months

## Jobs that use CompTIA DataX

- Data Scientist
- Quantitative Analyst
- Machine Learning Engineer/ Specialist
- Computer & Information Research Scientist

## Technical skills covered in the certification and training

<p>Mathematics and Statistics</p> <p><b>17%</b></p>	<ul style="list-style-type: none"> <li>• Given a scenario, apply the appropriate statistical method or concept.</li> <li>• Explain probability and synthetic modeling concepts and their uses.</li> <li>• Explain the importance of linear algebra and basic calculus concepts.</li> <li>• Compare and contrast various types of temporal models.</li> </ul>
<p>Modeling, Analysis and Outcomes</p> <p><b>24%</b></p>	<ul style="list-style-type: none"> <li>• Given a scenario, use the appropriate exploratory data analysis (EDA) method or process.</li> <li>• Given a scenario, analyze common issues with data.</li> <li>• Given a scenario, apply data enrichment and augmentation techniques.</li> <li>• Given a scenario, conduct a model design iteration process.</li> <li>• Given a scenario, analyze results of experiments and testing to justify final model recommendations and selection.</li> <li>• Given a scenario, translate results and communicate via appropriate methods and mediums.</li> </ul>
<p>Machine Learning</p> <p><b>24%</b></p>	<ul style="list-style-type: none"> <li>• Given a scenario, apply foundational machine-learning concepts.</li> <li>• Given a scenario, apply appropriate statistical supervised machine-learning concepts.</li> <li>• Given a scenario, apply tree-based supervised machine-learning concepts.</li> <li>• Explain concepts related to deep learning.</li> <li>• Explain concepts related to unsupervised machine learning.</li> </ul>
<p>Operations and Processes</p> <p><b>22%</b></p>	<ul style="list-style-type: none"> <li>• Explain the role of data science in various business functions.</li> <li>• Explain the process of and purpose for obtaining different types of data.</li> <li>• Explain data ingestion and storage concepts.</li> <li>• Given a scenario, implement common data-wrangling techniques.</li> <li>• Given a scenario, implement best practices throughout the data science life cycle.</li> <li>• Explain the importance of DevOps and MLOps principles in data science.</li> <li>• Compare and contract various deployment environments.</li> </ul>
<p>Specialized Applications of Data Science</p> <p><b>13%</b></p>	<ul style="list-style-type: none"> <li>• Compare and contrast optimization concepts.</li> <li>• Explain the use and importance of natural language processing (NLP) concepts.</li> <li>• Explain the use and importance of computer vision concepts.</li> <li>• Explain the purpose of other specialized applications in data science.</li> </ul>

Nearly all IT managers (97%) recognize the value certified professionals bring to the organization such as boosting productivity, helping to meet client requirements and closing organizational gaps.

**Skillsoft IT Skills & Salary Report 2022**

## Organizations that have contributed to the development of CompTIA DataX

- IBM
- University of Utah
- Tishbyte Analytics
- COLSA
- HyperPlanar
- Cisco Systems Inc
- Octo
- Flatiron School
- Chapman University
- SuccessKPI

## Research and Statistics

<b>Data Science Skills are in Demand</b>	1.05 million job postings in the US requested data science skills over the 12-month period ending May 2023. <sup>1</sup>
<b>Well-Paying Positions</b>	The median annual salary for Data Scientists is \$103,500, 123% higher than the median national wage for all occupations. <sup>2</sup>
<b>Job Openings</b>	More than 230,000 data scientist job roles were posted by US employers during the 12-month period ending May 2023. <sup>3</sup>
<b>Projected Job Growth</b>	The ten-year projected job growth for data scientists is 35%, while the average across all occupations is only 3%. <sup>4</sup>

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## Preparing for CompTIA DataX

### CertMaster Perform

CertMaster Perform is the newest addition to CompTIA's eLearning portfolio. It combines comprehensive coverage of exam objectives, a modern user experience and access to labs in live and simulated environments.

Featuring a competency-based design, it incorporates an initial diagnostic to gauge an individual's readiness for the exam helping to identify strengths and weaknesses, determining where one might need to focus exam preparation efforts, and providing individuals with a roadmap to fill in any knowledge gaps.

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### \* What does it mean to be a "high stakes" exam?

An extraordinarily high level of rigor is employed in developing CompTIA certifications. Each question created for a CompTIA exam undergoes multiple layers of quality assurance and thorough psychometric statistical validation, ensuring CompTIA exams are highly representative of knowledge, skills and abilities required of real job roles. This is why CompTIA certifications are a requirement for many professionals working in technology. Hiring managers and candidates alike can be confident that passing a CompTIA certification exam means confidence on the job.

### \* What does it mean to be a "vendor-neutral" certification?

All CompTIA certification exams are vendor neutral. This means each exam covers multiple technologies, without confining the candidate to any one platform. Vendor neutrality is important because it ensures IT professionals can perform important job tasks in any technology environment. IT professionals with vendor-neutral certifications can consider multiple solutions in their approach to problem solving, making them more flexible and adaptable than those with training to just one technology.

### \* Prepare for your exam with Official CompTIA Content.

First and foremost, CompTIA is an education company. We offer everything you need to prepare for your DataX certification exam. Explore training developed by CompTIA with options that fit various learning styles and timelines.

<sup>1</sup> Lightcast

<sup>2</sup> U.S. Bureau of Labor Statistics

<sup>3</sup> U.S. Bureau of Labor Statistics

<sup>4</sup> U.S. Bureau of Labor Statistics