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Why earn a master's in data science online?

Different career opportunities

Data is important to a wide-ranging set of organizations, which means you have many chances to become a valuable team member.

Gain skills in critical competencies

Learn to analyze, manage, and visualize data using the same curriculum as on-campus students.

Career support

Online students have access to the same resources as on-campus students.

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Masters in Data Science



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Data
Science**

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[Austin](#)

Master's Degree



**Master of Science
in Data
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What does a data scientist do?

In today's digital world, everything we do online — from our Google searches to where we travel — is a piece of data that paints a bigger picture of our personal trends in behavior, activity, and demographics. Some of this data — which translates into insights — can help governments, businesses, hospitals, and other entities make more informed decisions to improve efficiency, better serve clients, or even save lives.

Organizations, for example, rely on data scientists to give actionable insight into sales, operational efficiency, and ways companies can use to better meet their customers' needs. This interdisciplinary field uses scientific methods, processes, algorithms, and systems to extract information and insight from raw data, with the goal of applying that knowledge to solve organizational challenges. Data scientists apply machine-learning algorithms to numbers, text, images, video, audio, and more to produce artificial intelligence (AI) systems to perform tasks that generate insights and uncover patterns that can be translated into tangible business value.¹

Data scientists do more than analyze data and build statistical models — they also are creative strategists with sharp communication skills to help organizations understand data through narratives.



Admission requirements for a master's degree in data science

Admission requirements for online data science [master's degrees](#) vary by university, but most will require a completed [bachelor's degree](#) from an accredited institution in areas like [data science](#), data analytics, computer science, engineering or mathematics. Other common requirements typically include:

- Official transcripts

- Resume
- Personal statement
- Letters of recommendation
- Demonstration of industry experience
- GRE scores

Note that some programs may not require GRE scores to apply, so make sure to check your preferred program's requirements. It also may be important to note any prerequisite courses on topics such as programming, statistics, or math.

Data science curriculum

An online curriculum in data science will be similar — and just as challenging — as a traditional, on-campus curriculum. Coursework will include areas like programming, data mining, machine learning database management and data visualization, and will typically include a mix of core courses and electives. Some programs may offer areas of concentration — like language analytics or data platforms — for even greater focus, and certificate options also may be available.

You can expect to participate in classroom discussions, projects, presentations, and breakout groups, just as you would in a traditional program. You also will have access to your instructors in scheduled office hour sessions, as well as opportunities to connect and ask questions as needed. Additionally, many data science programs include an on-campus immersive experience, during which you will visit, in-person, your university's campus, for a few days of invaluable networking opportunities, engaging group projects, and meaningful real-world problem solving.

One of the most prominent advantages of an online program is flexibility: Students typically complete coursework on their own schedule and earn their degree while continuing to work in their current career and maintaining their personal and/or family responsibilities. To make our data science master's programs even more flexible, at edX, we offer part- and full-time options, and make all materials accessible around the world.

Master of data science jobs

Data and information analyst employment is expected to grow 33% from 2020 to 2030, much faster than the average for all occupations.² Additionally, data science professions are ranked #3 on Glassdoor's Best Jobs in America.³

Career opportunities are vast within the data science field, with many graduates leveraging their new-found technical expertise to succeed in industries that include biotech, energy, finance, government, health care, or manufacturing. This skillset allows organizations to maximize efficiency, grow customer relationships, and reach business goals.

Businesses depend on skilled data scientists to communicate the insights they gather and help develop a plan of action for implementing decisions. They work closely with different stakeholders within an organization, often employing a multifaceted approach to their work that values both quantitative and qualitative abilities.

Employees and other professionals with data science expertise are often among the most valued members for their capability of offering indispensable business and organizational, as well as their ability to communicate a possible strategy and a path forward. Possible data science job titles include:

- Business analyst
- Computer information scientist
- Data analyst
- Data architect
- Data engineer
- Operations research and systems analyst
- Software developer
- Technical integration analyst
- Solutions engineer

What are the highest data science salaries?

Data science salaries may vary based on location, employer, job title, and industry. A candidate's qualifications and collective years of experience may open the door for management positions, which typically command higher pay than more entry-level positions. Plus, depending on the organization, there may be an available sign-on bonus.

The median annual wage for data scientists and related careers in computer and information science was \$131,490 as of May 2021. However, the highest 10% of data science professionals earned more than \$208,000.²

How to become a data scientist online

While there is no single pathway to a successful career in data science, the process involves acquiring relevant knowledge and a robust skill set that will enable you to help solve some of the world's most pressing challenges and communicate solutions in an efficient and engaging manner.

A number of data science professionals enter the workforce with education and training in [computer science](#), statistics, or engineering. Those who study data science specifically, or a related discipline, also may work in healthcare, building statistical models that support clinical decision-making.

While there is no widely accepted minimum education requirement for becoming a data scientist, a combination of technical and non-technical skills may help along the way, and graduate programs can help professionals acquire them. A data science foundation from working on open source or on personal projects, as well as volunteer work, can come in handy, too. Critical thinking is a crucial skillset, especially if rooted in the desire to innovate, solve problems, collaborate, and be productive.

Ultimately, your career path will depend on personal goals, interests, and educational background. Being intellectually curious, attentive to detail, proactive in solving problems, and eager to learn new skills are just a few examples of personal traits that will help professionals be more effective in the workplace, master core competencies, and keep up with new developments in the field.

[Explore data science programs](#)

Find the best online program for your data science career

There are many aspects to consider when choosing an online data science program. Because these programs are indeed online, you can select the one that fits your exact needs and goals, regardless of where it's located. Here are a few factors you may consider when choosing a program:

Length of study: Program length may vary anywhere from a year — often for accelerated programs — to 24 months, part time, depending on program requirements. This often amounts to 48-60 credit hours. Additionally, some programs may offer bridge programs — or foundational coursework — for students without a data science background or experience.

Internships/immersions: While most online data science programs do not require an internship, many require one or more on-campus immersion experiences where you may work with students in your cohorts to solve real-world data science problems and network. Students may also be encouraged to attend their graduation ceremonies.

Faculty/university prestige: Often, online instructors are the same faculty who teach in a given university's on-campus program, and a majority have robust research backgrounds or extensive field experience. Additionally, it is worth checking if the university has won any awards or recognition for its data science program.

Networking: Many data-science schools will typically have virtual networking events, as well as in-person opportunities during immersions on campus. Alumni and faculty also may be great networking resources for your future, and most online graduates have access to the university's alumni organizations.

Career outcomes: While the data science field is exploding, some programs may offer more focused career resources or job-search support than others. In fact, some universities offer career assistance to both online and on-campus graduates for the duration of their careers. This may include resume advice, interview tips, or connections to open positions.

Online experience: Quality online data-science master's programs ensure your experience is just as valuable as on-campus programs. This may include live courses, an accessible platform, faculty connections, and supportive resources.

Admission requirements: The data science programs you are considering should clearly list admission requirements on their websites. These requirements may vary slightly, but generally include letters of recommendation, a personal statement, a resume, and test scores. While most require an application fee, this fee can often be waived if you apply by certain deadlines or attend a pre-application webinar.

Frequently asked questions

What subjects are required for a master's in data science? ▼

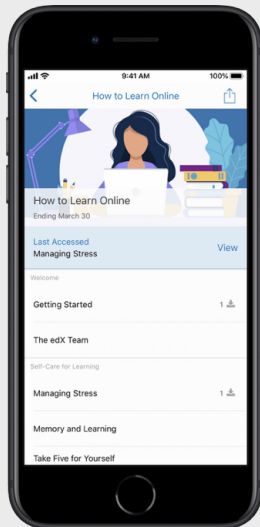
Is data science hard? ▼

What math skills do you need for data science? ▼

How long is a data science master's program? ▼

Is a master's in data science worth it? ▼

How much does an online data science master's cost? ▼




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¹ Data Robot, *What is Data Science?*, <https://www.datarobot.com/wiki/data-science/>  (visited May 11, 2022).

² U.S. Department of Labor, *Occupational Outlook Handbook*, <https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm#tab-1>  (visited May 11, 2022).

³ Glassdoor, *50 Best Jobs in America for 2022*, https://www.glassdoor.com/List/Best-Jobs-in-America-LST_KQ0,20.htm  (visited May 11, 2022).

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