



# Data Scientist

## **JOB OUTLOOK<sup>4</sup>**

Data science is a field that—like many other computer and information technology occupations—is projected to grow rapidly. Companies all over the world are collecting more data and using it in new and different ways, so there will be a greater need than ever for data science professionals to help make sense of the information being collected. It is also a career trajectory with a higher-than-average income.

## **SALARY RANGE<sup>5</sup>**

\$92,000–\$149,000

## **WHO ARE THEY?<sup>1,2,3</sup>**

Data scientists are curious and analytical professionals who “wrangle” large datasets and use the patterns and information they find to help companies solve big problems. They might like thinking in terms of probability and statistics, and they probably feel most comfortable when they can rely on data and hard evidence to answer a question. However, that doesn't mean they always think in black and white. Data scientists also need to be creative and curious in order to be able to interpret information when the answer is not always obvious. You will find data science roles in just about every industry, and for a large international business like Microsoft, they play a key role in ensuring that Microsoft's customers have an excellent experience, however they interact with the company.

## **WHAT DO THEY DO?<sup>1,2,3</sup>**

Data scientists analyze large sets of data (facts and statistics), find patterns, and test hypotheses. They may use machine learning, computer science, and programming languages like SAS, R, SQL, and Python. At Microsoft, data scientists help the company understand what their customers want to buy and how they want to find it. They analyze customer behavior to accurately predict what new and exciting features similar customers will like. They then partner with other parts of the company to turn those insights into actionable next steps for company growth. Data scientists must always use knowledge of the industry, common sense, and contextual information to determine what the data is trying to tell them, and the lessons they learn may help companies to improve strategies and optimize revenue.



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## EDUCATION/ TRAINING

- Bachelor's degree in a related STEM field
- Master's degree or doctorate in a related STEM field
- Internships and/or prior work experience
- Experience with coding languages such as SAS, SQL, R, and Python preferred

## HOW DO I BECOME ONE?<sup>1,4</sup>

A data scientist will need at least a bachelor's degree, and an advanced degree like a master's degree or a Ph.D. may make someone more competitive for this role. A degree in data science, analytics, computer science, or computer engineering would be beneficial in this position. To prepare for this career, students should take courses like computer science, physics, algebra, calculus, and statistics that will allow them to build analytical and critical-thinking skills. Data scientists will also need to develop excellent communication skills.

<sup>1</sup> "What is a Data Scientist?" SAS. [https://www.sas.com/en\\_us/insights/analytics/what-is-a-data-scientist.html](https://www.sas.com/en_us/insights/analytics/what-is-a-data-scientist.html).

<sup>2</sup> "Data Scientist." Microsoft. <https://careers.microsoft.com/us/en/job/767941/Data-Scientist>.

<sup>3</sup> "Full Time Opportunities for Students or Recent Graduates: Data & Applied Sciences." Microsoft. <https://careers.microsoft.com/us/en/job/650816/Full-Time-Opportunities-for-Students-or-Recent-Graduates-Data-Applied-Sciences>.

<sup>4</sup> "Occupational Outlook Handbook." Bureau of Labor Statistics. <https://www.bls.gov/ooh/computer-and-information-technology/computer-and-information-research-scientists.htm>.

<sup>5</sup> "Occupational Employment Statistics." Bureau of Labor Statistics. <https://www.bls.gov/oes/2018/may/oes151111.htm>.