DATA ANALYTICS CAREERS

CAREER SERVICES | CAREER PATHS

Data Analysts are found in every industry including business, e-commerce, finance, government, healthcare, science, social networking, and telecommunications. A major roadblock to the widespread use of big data is the lack of workers with the appropriate training and skills. Big data work can require not only knowledge of statistical analysis and computer systems, but experience in the relevant field or industry. In addition to having a bachelor's degree, most analysts who work with big data have a master's or higher degree. Common specialties include mathematics, statistics, or computer science.

NATURE OF THE WORK

The increased amount of data in the world has created many opportunities. Most companies, in all industries, need skilled data scientists/analysts to extract important details from data, filter the red flags, interpret the data, find solutions, or provide management decisions to make the business perform better. In a way, a data analyst can predict and calculate the potential results of the business by looking at streams of data.

The U.S. Bureau of Labor Statistics (BLS) classifies data scientists as statisticians, computer programmers, or in other occupations, depending on their tasks. Workers study big data using both conventional and newly developed statistical methods. Data is collected, stored, processed and cleaned (scrubbed), and analyzed. The results are summarized and reported to managers and clients.

Data scientists interpret information from a range of sources, such as customer transactions, click streams, sensors, social media, log files, GPS plots, or even check whether Tweets sent to a company are positive or negative, trace where sales are coming from and much more. A data analyst will be able to take a business problem and transform it to a data question, realize predictive business analysis, and then create a general story about the findings.

There are two types of big data: structured and unstructured. Structured data are numbers and words that can be easily categorized and analyzed. Unstructured data include more complex information, such as customer reviews from commercial websites, photos and other multimedia, and comments on social networking sites.

DATA ANALYTICS CAREERS

CAREER SERVICES | OUTLOOK AND INCOME | TITLES AND SKILLS

OPPORTUNITIES FOR EMPLOYMENT

Data Analysts are found in every industry including business, e-commerce, finance, government, healthcare, science, social networking, and telecommunications. The demand for data analysts is strong. IBM estimates there will be 2.7 million jobs available for data analysts and related professions by 2020, an increase of approximately 2.5 million since just 2017. Approximately 40% of the jobs in data analytics require at least a master's degree*. Employment of operations and research analysts (including data analysts) is projected to grow 25 percent from 2019 to 2029**, much faster than the average for all occupations.

*Source: Forbes.com

**Source: US Department of Labor, Bureau of Labor Statistics, OOHH

SALARY EXPECTATIONS

The average annual salary for Data Scientists is $103,930 * (May 2020).

*Source: BLS.gov - Occupational Employment Statistics.

SOURCES OF ADDITIONAL INFORMATION

- Occupational Outlook Handbook - https://www.bls.gov/ooh
- American Mathematical Society - https://www.ams.org/home/page
- American Statistical Society - https://www.amstat.org
- National Science Foundation Big Data Initiative - https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504767

JOB TITLES

- Actuary
- Analyst
- Chief Data Officer
- Chief Information Officer
- Computer Programmer
- Computer Systems Analyst
- Data Analyst
- Data Scientist
- Economist
- Financial Analyst
- Market Research Analyst
- Operations Research Analysts
- Postsecondary Instructors
- Quantitative Analyst
- Software Developers
- Statistician
- Systems Analysts

REQUIRED SKILLS

- Analytical Skills
- Communication
- Creative Thinking
- Computer Skills
- Critical Thinking
- Decision Making
- Detail Oriented
- Ingenuity
- Intellectual Curiosity
- Interpersonal Skills
- Organization
- Problem-solving
- Teamwork
- Time-management
- Willingness to learn