



## DATA ANALYTICS

In this rapidly-growing landscape, companies are looking for individuals who can turn data into actionable insights to improve processes and drive successful decision-making.

**Employment of data analysts is projected to grow more strongly than the average for all occupations.<sup>1</sup>**

### Data Science

#### What is Data Science?<sup>2</sup>

Data science combines machine learning, statistics, advanced analysis and programming. It is a method for checking, cleansing, transforming and modeling data to find useful insights.

#### Must-Have Data Science Skills:

- Understanding of multiple analytical techniques
- Experience with data mining and data visualization
- Hands-on experience in SQL database coding
- Knowledge of unstructured data management techniques
- Strong knowledge of programming languages such as Python
- Understanding of core web development technologies (HTML, CSS and JavaScript)

#### How Data Science Works<sup>4</sup>

Data science involves discovering and extracting patterns in data through a combination of analytical methods, domain expertise and technology.

A data scientist gathers data from a variety of sources and applies machine learning, predictive analytics and sentiment analysis to obtain important information. These experts can offer accurate predictions and in-depth knowledge that can be used for data-driven decision making.<sup>5</sup>

Data science is also heavily applied to Netflix. Users are offered unique recommendations and movie suggestions. These suggestions rely heavily on data science and unique algorithms in order for accuracy.



One of the most straightforward applications of machine learning can be found on Netflix.<sup>8</sup> After you watch a program, you may discover the service suggesting you content based on your preferences, likes and interests.

### Machine Learning

#### What is Machine Learning?<sup>3</sup>

Machine learning is a field of study focused on training systems to learn from data, find patterns, and predict future trends without being explicitly programmed to do so.

#### Must-Have Machine Learning Skills:

- Understanding of computer science fundamentals
- Knowledge of probability and statistics
- Experience with data evaluation and modeling
- Understanding and application of algorithms
- In-depth knowledge of programming
- Familiarity with text processing techniques

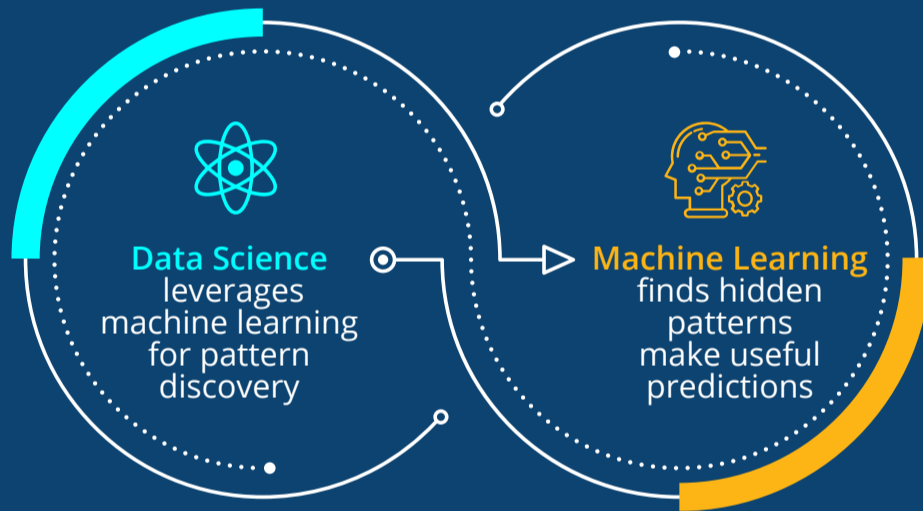
#### How Machine Learning Works<sup>6</sup>

Data is generated in large volumes and presents an opportunity to extract insight. That's where machine learning comes in. Machine learning uses this vast amount of data to better retrieve insight and produce better models.

For example, when you browse on Amazon, you generate data, which is used to better understand your behavior and push targeted advertisements and deals to ultimately get you to make a purchase.

## How Data Science and Machine Learning Work Together<sup>7</sup>

Data science and machine learning depend on each other to make decisions, conduct analyses and make predictions. Machine learning engineers and data scientists embody two distinct roles, but they are both part of the same team. It comes down to the division between scientist and engineer.



## Job Outlooks<sup>9</sup>



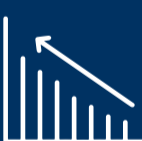
### LinkedIn

Machine Learning Engineers, Data Scientists and Big Data Engineers rank among the top emerging jobs on LinkedIn.



**364,000**

According to IBM, by 2020, the number of jobs for all U.S. data professionals will increase by 364,000 openings to 2,720,000.



**+11.5M Jobs**

Job growth in the next decade is expected to exceed that of the previous decade, creating 11.5M jobs by 2026, according to the U.S. Bureau of Labor Statistics.



**650%**

Data Scientist positions have risen by more than 650% since 2012, but currently, 35,000 people in the U.S. have data science skills, while hundreds of businesses are recruiting for those roles.

## Statistics: Every Minute



## In Conclusion

Today's demand for data professionals is exceeding the current supply. Now is the time to become an in-demand expert and make an immediate impact by delivering actionable insights that have the potential to change lives.

Are you ready to join the data revolution? Explore the **Berkeley Online Data Analytics Boot Camp** to discover how you can learn the fundamentals for this demanding industry.

**LEARN MORE**

### Sources:

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