

Data analysts typically use statistical methods to test these hypotheses and draw conclusions from the data. Data scientists often work with unstructured data such as text or images and use machine learning algorithms to build predictive models and make data-driven decisions. However, data science is different from computer science and information science. For instance, a data scientist might develop a recommendation system for an e-commerce platform by analyzing user behavior patterns and using machine learning algorithms to predict user preferences. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. In a 2001 paper, he advocated an expansion of statistics beyond theory into technical areas; because this would significantly change the field, it warranted a new name. In 1962, John Tukey described a field he called "data analysis", which resembles modern data science. For example, a data analyst might analyze sales data to identify trends in customer behavior and make recommendations for marketing strategies. During the 1990s, popular terms for the process of finding patterns in datasets (which were increasingly large) included "knowledge discovery" and "data mining". For example, a data analyst might analyze sales data to identify trends in customer behavior and make recommendations for marketing strategies. In contrast, data science deals with quantitative and qualitative data (e.g., from images, text, sensors, transactions, customer information, etc.) and emphasizes prediction and action. A decade later, they reaffirmed it, stating that "the job is more in demand than ever with employers". F. A decade later, they reaffirmed it, stating that "the job is more in demand than ever with employers". Cleveland. While data analysis focuses on extracting insights from existing data, data science goes beyond that by incorporating the development and implementation of predictive models to make informed decisions. However, data science is different from computer science and information science. Data science is an interdisciplinary academic field that uses statistics, scientific computing, scientific methods, processes, algorithms and systems to extract or extrapolate knowledge and insights from noisy, structured, and unstructured data. There is still no consensus on the definition of data science, and it is considered by some to be a buzzword. In 1996, the International Federation of Classification Societies became the first conference to specifically feature data science as a topic. Data scientists often work with unstructured data such as text or images and use machine learning algorithms to build predictive models and make data-driven decisions. Though it was used by the National Science Board in their 2005 report "Long-Lived Digital Data Collections: Enabling Research and Education in the 21st Century", it referred broadly to any key role in managing a digital data collection. "Data science" became more widely used in the next few years: in 2002, the Committee on Data for Science and Technology launched the Data Science Journal. In a 2001 paper, he advocated an expansion of statistics beyond theory into technical areas; because this would significantly change the field, it warranted a new name. As such, it incorporates skills from computer science, statistics, information science, mathematics, data visualization, information visualization, data sonification, data integration, graphic design, complex systems, communication and business.