

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. In 1998, Hayashi Chikio argued for data science as a new, interdisciplinary concept, with three aspects: data design, collection, and analysis. Moreover, both fields benefit from critical thinking and domain knowledge, as understanding the context and nuances of the data is essential for accurate analysis and modeling. Both fields require a solid foundation in statistics, programming, and data visualization, as well as the ability to communicate findings effectively to both technical and non-technical audiences. Later, attendees at a 1992 statistics symposium at the University of Montpellier II acknowledged the emergence of a new discipline focused on data of various origins and forms, combining established concepts and principles of statistics and data analysis with computing. Data science and data analysis are both important disciplines in the field of data management and analysis, but they differ in several key ways. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. A data scientist is a professional who creates programming code and combines it with statistical knowledge to create insights from data. 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. Data science also integrates domain knowledge from the underlying application domain (e.g., natural sciences, information technology, and medicine). Cleveland. Data science also integrates domain knowledge from the underlying application domain (e.g., natural sciences, information technology, and medicine). He reasoned that a new name would help statistics shed inaccurate stereotypes, such as being synonymous with accounting or limited to describing data. For example, a data analyst might analyze sales data to identify trends in customer behavior and make recommendations for marketing strategies. 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. Cleveland. Data analysts typically use statistical methods to test these hypotheses and draw conclusions from the data. Data science and data analysis are both important disciplines in the field of data management and analysis, but they differ in several key ways. 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. 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 analysis typically involves working with smaller, structured datasets to answer specific questions or solve specific problems. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. 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. Data analysts typically use statistical methods to test these hypotheses and draw conclusions from the data.