

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. Both fields play vital roles in leveraging the power of data to understand patterns, make informed decisions, and solve complex problems across various domains. Jeff Wu used the term "data science" for the first time as an alternative name for statistics. Data science is multifaceted and can be described as a science, a research paradigm, a research method, a discipline, a workflow, and a profession. 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. In 2015, the American Statistical Association identified database management, statistics and machine learning, and distributed and parallel systems as the three emerging foundational professional communities. Andrew Gelman of Columbia University has described statistics as a non-essential part of data science. Data science is an interdisciplinary field focused on extracting knowledge from typically large data sets and applying the knowledge and insights from that data to solve problems in a wide range of application domains. Data science is multifaceted and can be described as a science, a research paradigm, a research method, a discipline, a workflow, and a profession. 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. The modern conception of data science as an independent discipline is sometimes attributed to William S. 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. "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. F. Data analysis focuses on extracting insights and drawing conclusions from structured data, while data science involves a more comprehensive approach that combines statistical analysis, computational methods, and machine learning to extract insights, build predictive models, and drive data-driven decision-making. Data analysis focuses on extracting insights and drawing conclusions from structured data, while data science involves a more comprehensive approach that combines statistical analysis, computational methods, and machine learning to extract insights, build predictive models, and drive data-driven decision-making. 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 science is an interdisciplinary field focused on extracting knowledge from typically large data sets and applying the knowledge and insights from that data to solve problems in a wide range of application domains. In 1962, John Tukey described a field he called "data analysis", which resembles modern data science. A decade later, they reaffirmed it, stating that "the job is more in demand than ever with employers". 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. 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. While both fields involve working with data, data science is more of an interdisciplinary field that involves the application of statistical, computational, and machine learning methods to extract insights from data and make predictions, while data analysis is more focused on the examination and interpretation of data to identify patterns and trends.