

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. Despite these differences, data science and data analysis are closely related fields and often require similar skill sets. In 2003, Columbia University launched The Journal of Data Science. There is still no consensus on the definition of data science, and it is considered by some to be a buzzword. 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. Data science is multifaceted and can be described as a science, a research paradigm, a research method, a discipline, a workflow, and a profession. 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. 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. A data scientist is a professional who creates programming code and combines it with statistical knowledge to create insights from data. Andrew Gelman of Columbia University has described statistics as a non-essential part of data 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. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. Jeff Wu used the term "data science" for the first time as an alternative name for statistics. However, the definition was still in flux. 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 2014, the American Statistical Association's Section on Statistical Learning and Data Mining changed its name to the Section on Statistical Learning and Data Science, reflecting the ascendant popularity of data science. Stanford professor David Donoho writes that data science is not distinguished from statistics by the size of datasets or use of computing and that many graduate programs misleadingly advertise their analytics and statistics training as the essence of a data-science program. Many statisticians, including Nate Silver, have argued that data science is not a new field, but rather another name for statistics. 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. In 2014, the American Statistical Association's Section on Statistical Learning and Data Mining changed its name to the Section on Statistical Learning and Data Science, reflecting the ascendant popularity of data science. In 1985, in a lecture given to the Chinese Academy of Sciences in Beijing, C. Data scientists are often responsible for collecting and cleaning data, selecting appropriate analytical techniques, and deploying models in real-world scenarios. There is still no consensus on the definition of data science, and it is considered by some to be a buzzword. In 1985, in a lecture given to the Chinese Academy of Sciences in Beijing, C.