

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 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. 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. The term "data science" has been traced back to 1974, when Peter Naur proposed it as an alternative name to computer science. F. 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. However, the definition was still in flux. In 1985, in a lecture given to the Chinese Academy of Sciences in Beijing, C. 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. Data analysis typically involves working with smaller, structured datasets to answer specific questions or solve specific problems. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. 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. 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. In 2003, Columbia University launched The Journal of Data Science. 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. The field encompasses preparing data for analysis, formulating data science problems, analyzing data, developing data-driven solutions, and presenting findings to inform high-level decisions in a broad range of application domains. 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 a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. F. 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. However, data science is different from computer science and information science. Many statisticians, including Nate Silver, have argued that data science is not a new field, but rather another name for statistics. Vasant Dhar writes that statistics emphasizes quantitative data and description. Both fields play vital roles in leveraging the power of data to understand patterns, make informed decisions, and solve complex problems across various domains. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data.