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. Despite these differences, data science and data analysis are closely related fields and often require similar skill sets. Big data is a related marketing term. This can involve tasks such as data cleaning, data visualization, and exploratory data analysis to gain insights into the data and develop hypotheses about relationships between variables. 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. 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. Despite these differences, data science and data analysis are closely related fields and often require similar skill sets. F. Despite these differences, data science and data analysis are closely related fields and often require similar skill sets. They work at the intersection of mathematics, computer science, and domain expertise to solve complex problems and uncover hidden patterns in large datasets. He reasoned that a new name would help statistics shed inaccurate stereotypes, such as being synonymous with accounting or limited to describing data. In 1962, John Tukey described a field he called "data analysis", which resembles modern data science. 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. Big data is a related marketing term. Turing Award winner Jim Gray imagined data science as a "fourth paradigm" of science (empirical, theoretical, computational, and now data-driven) and asserted that "everything about science is changing because of the impact of information technology" and the data deluge. A decade later, they reaffirmed it, stating that "the job is more in demand than ever with employers". Vasant Dhar writes that statistics emphasizes quantitative data and description. Data science is multifaceted and can be described as a science, a research paradigm, a research method, a discipline, a workflow, and a profession. Statistician Nathan Yau, drawing on Ben Fry, also links data science to human–computer interaction: users should be able to intuitively control and explore data. 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. F. 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. However, data science is different from computer science and information science.