He describes data science as an applied field growing out of traditional statistics. However, the definition was still in flux. 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. Cleveland. Many statisticians, including Nate Silver, have argued that data science is not a new field, but rather another name for statistics. In 2003, Columbia University launched The Journal of Data Science. In 2012, technologists Thomas H. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. 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. Others argue that data science is distinct from statistics because it focuses on problems and techniques unique to digital data. In 1996, the International Federation of Classification Societies became the first conference to specifically feature data science as a topic. 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. 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. 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 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. 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. 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. 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. 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. He describes data science as an applied field growing out of traditional statistics. 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. The modern conception of data science as an independent discipline is sometimes attributed to William S. Vasant Dhar writes that statistics emphasizes quantitative data and description.