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. It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. The term "data science" has been traced back to 1974, when Peter Naur proposed it as an alternative name to computer 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. There is still no consensus on the definition of data science, and it is considered by some to be a buzzword. Both fields require a solid foundation in statistics, programming, and data visualization, as well as the ability to communicate findings effectively to both technical and non-technical audiences. 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. In addition to statistical analysis, data science often involves tasks such as data preprocessing, feature engineering, and model selection. The professional title of "data scientist" has been attributed to DJ Patil and Jeff Hammerbacher in 2008. 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. However, data science is different from computer science and information science. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. Davenport and DJ Patil declared "Data Scientist: The Sexiest Job of the 21st Century", a catchphrase that was picked up even by major-city newspapers like the New York Times and the Boston Globe. Davenport and DJ Patil declared "Data Scientist: The Sexiest Job of the 21st Century", a catchphrase that was picked up even by major-city newspapers like the New York Times and the Boston Globe. In 1962, John Tukey described a field he called "data analysis", which resembles modern data science. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. Many statisticians, including Nate Silver, have argued that data science is not a new field, but rather another name for statistics. In 1962, John Tukey described a field he called "data analysis", which resembles modern data science. In 2003, Columbia University launched The Journal of Data Science. Data science is a "concept to unify statistics, data analysis, informatics, and their related methods" to "understand and analyze actual phenomena" with data. However, data science is different from computer science and information science. The modern conception of data science as an independent discipline is sometimes attributed to William S. The professional title of "data scientist" has been attributed to DJ Patil and Jeff Hammerbacher in 2008.