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Soggetti	Information retrieval Computer architecture Computer graphics User interfaces (Computer systems) Human-computer interaction Data Storage Representation Computer Graphics User Interfaces and Human Computer Interaction
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Nota di contenuto	Data Science -- Big Data -- Visual Computing -- Visualization -- Geometric Visualization -- Visual Analytics -- Data Science Institutes and Data Centers.
Sommario/riassunto	Data science addresses the need to extract knowledge and information from data volumes, often from real-time sources in a wide variety of disciplines such as astronomy, bioinformatics, engineering, science, medicine, social science, business, and the humanities. The range and volume of data sources has increased enormously over time, particularly those generating real-time data. This has posed additional challenges for data management and data analysis of the data and effective representation and display. A wide range of application areas are able to benefit from the latest visual tools and facilities. Rapid analysis is needed in areas where immediate decisions need to be made. Such areas include weather forecasting, the stock exchange, and

security threats. In areas where the volume of data being produced far exceeds the current capacity to analyze all of it, attention is being focussed how best to address these challenges. Optimum ways of addressing large data sets across a variety of disciplines have led to the formation of national and institutional Data Science Institutes and Centers. Being driven by national priority, they are able to attract support for research and development within their organizations and institutions to bring together interdisciplinary expertise to address a wide variety of problems. Visual computing is a set of tools and methodologies that utilize 2D and 3D images to extract information from data. Such methods include data analysis, simulation, and interactive exploration. These are analyzed and discussed.
