Big data analytics involves examining large and complex datasets to uncover patterns, trends, and insights. These datasets are characterized by high volume, velocity, and variety.

Big data technologies include distributed storage systems, parallel processing frameworks, and data visualization tools. Organizations use big data analytics for decision-making, optimization, and predictive modeling.

Applications of big data analytics span sectors such as healthcare, finance, marketing, and transportation. Challenges include data quality, privacy, and the need for skilled professionals. Advances in cloud computing and machine learning continue to drive the growth of big data analytics.