Data science incorporates tools from multiple disciplines to gather a data set, process, and derive insights from the data set, extract meaningful data from the set, and interpret it for decision-making purposes.

The disciplinary areas that make up the data science field include mining, statistics, machine learning, analytics, and programming.

Data mining applies algorithms to the complex data set to reveal patterns that are then used to extract useful and relevant data from the set.

Statistical measures or predictive analytics use this extracted data to gauge events that are likely to happen in the future based on what the data shows happened in the past.

Machine learning is an artificial intelligence tool that processes mass quantities of data that a human would be unable to process in a lifetime. Machine learning perfects the decision model presented under predictive analytics by matching the likelihood of an event happening to what actually happened at a predicted time.

Using analytics, the data analyst collects and processes the structured data from the machine learning stage using algorithms.

The analyst interprets, converts, and summarizes the data into a cohesive language that the decision-making team can understand.

Data science is applied to practically all contexts and, as the data scientist's role evolves, the field will expand to encompass data architecture, data engineering, and data administration