Difference Between Machine Learning and Data Analytics

Ans :   
The following is how I understand the distinction; it's based on my own experience engaging with various communities over the last few years, as I've been teaching myself statistics/data science/ML.

The term "machine learning" comes out of a fairly coherent academic/research community, centered in computer science but with moderately strong connections to a few other fields, such as statistics, and weaker connections to fields like genomics. For one example, take a look at the research areas of the faculty in Carnegie Mellon's [Machine Learning Department](https://www.ml.cmu.edu/people/core-faculty.html). For another example, all three of the authors of [Elements of Statistical Learning](http://rads.stackoverflow.com/amzn/click/0387848576) — which seems to be one of the standard textbooks in machine learning — are statisticians.

On the other hand, the term "data analysis" is used in radically different ways in different sectors. Data analysts in established companies (especially 10+ years ago) might use Excel and Tableau to plot earning trends over time and do some simple financial modeling. The data analysts in a biology lab might be a couple postdocs and grad students who have taught themselves enough R or Python to run statistical tests and generate plots. Web- or app-based companies might have data analysts building predictive machine learning models of audience/consumer behavior, in order to find ways to marginally increase sales or ad revenue. Data journalists at news media outlets might focus more on building visualizations and interactives of data aggregates and summaries using D3, with little or no deep quantitative analysis (i.e., using neither classical statistics nor predictive models).

What is Big Data ?

Ans : **Big Data** is a collection of data that is huge in volume, yet growing exponentially with time. It is a data with so large size and complexity that none of traditional data management tools can store it or process it efficiently. Big data is also a data but with huge size.

What are most common characterstic used in descriptive statistics?

This page describes graphical and pictorial methods of descriptive statistics and the three most common measures of descriptive statistics (central tendency, dispersion, and association).

Descriptive statistics can be useful for two purposes: 1) to provide basic information about variables in a dataset and 2) to highlight potential relationships between variables. The three most common descriptive statistics can be displayed graphically or pictorially and are measures of:

* Graphical/Pictorial Methods
* Measures of Central Tendency
* Measures of Dispersion
* Measures of Association

what is quantitative data and qualitative data ?

Qualitative data is non-statistical and is typically unstructured or semi-structured. This data isn’t necessarily measured using hard numbers used to develop graphs and charts. Instead, it is categorized based on properties, attributes, labels, and other identifiers.

Qualitative data can be used to ask the question “why.” It is investigative and is often open-ended until further research is conducted. Generating this data from qualitative research is used for theorizations, interpretations, developing hypotheses, and initial understandings.

Contrary to qualitative data, quantitative data is statistical and is typically structured in nature – meaning it is more rigid and defined. This data type is measured using numbers and values, making it a more suitable candidate for data analysis.

Whereas qualitative is open for exploration, quantitative data is much more concise and close-ended. It can be used to ask the questions “how much” or “how many,” followed by conclusive information