# What is Machine learning?

It is a collection of algorithms and techniques used to design systems that learn from data

## Big data vs Machine learning:

* Big Data is simply lots of data. Terabytes, Petabytes of data.
* Machine Learning is finding patterns in (big) data and learning from it.

When there is lots of data that is constantly being generated, there will be useful patterns in this data. For eg: if these are log files of a Social Media website - you could find patterns like - user’s in South Asia tend to write posts late in the evening, where as user’s in Latin America tend to write posts during the afternoon. Essentially what you are doing is learning from this wealth of **big data**

Machine Learning can be applied to smaller datasets too, however the outcome will not be that accurate, because learning opportunity (data size) is low.

## Machine learning vs Data mining:

* Machine learning focuses on prediction, based on known properties learned from the training data.
* Data mining (which is the analysis step of Knowledge Discovery in Databases) focuses on the discovery of (previously) unknown properties on the data.