What is machine learning?

**What are the applications of Machine Learning?**

Companies like Google, Facebook, Baidu, IBM, Microsoft uses ML extensively to push their respective ads to the relevant users.

Here are a few applications that you should know:

1. Banking & Financial services: ML can be used to predict the customers who are likely to default from paying loans or credit card bills. This is of paramount importance, as machine learning would help the banks to identify the customers who can be granted loans and credit cards.
2. Healthcare: It is used to diagnose deadly diseases (e.g. cancer) based on the symptoms of patients and tallying them with the past data of similar kind of patients.
3. Retail: It is used to identify products which sell more frequently (fast moving) and the slow moving products which help the retailers to decide what kind of products to introduce or remove from the shelf. In addition, machine-learning algorithms can be used to find which two / three or more products sell together. This is done to design customer loyalty initiatives, which in turn helps the retailers to develop and maintain loyal customers.

**Types of Machine learning**

Deep Learning

Deep learning is a family of advanced machine learning algorithms which used the concept of human brain neurons to model arbitrary functions to capture the real world non-linear complexities which traditional machine learning algorithms are not capable of.

These algorithms require lot of data to perform.

**Important Concepts:-**

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Mahalonobis distance – It is best suited to detect outliers in n-dimensions where n >1

R's mahalanobis() function provides a simple means of detecting outliers in multidimensional data.

#TODO - <https://www.r-bloggers.com/outlier-detection-with-mahalanobis-distance/>