Machine Learning

What is Machine Learning and how it works ?

Data science and Machine learning Online Course

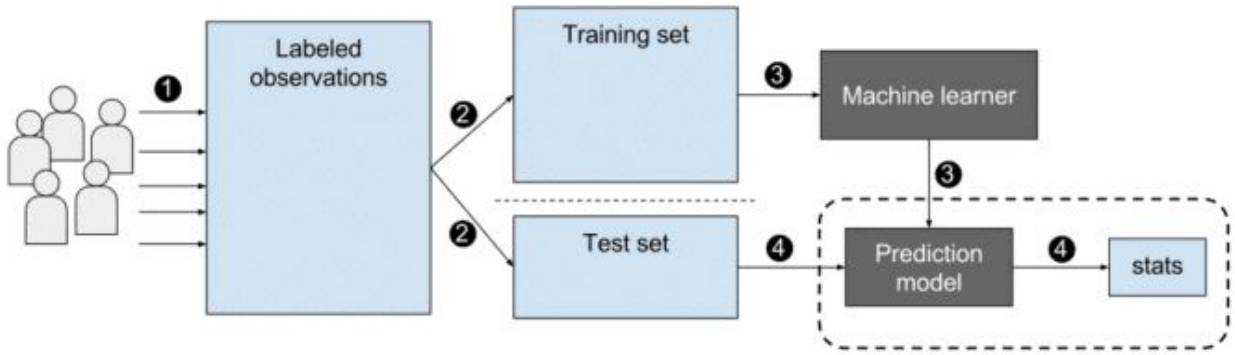
What is Machine Learnings ?

Machine learning (ML) is the study of computer algorithms that improve automatically through experience

Types of Machine Learnings:

If you're learning a task under supervision, someone is present judging whether you're getting the right answer. Similarly, in supervised learning, that means having a full set of labeled data while training an algorithm.

Fully labeled means that each example in the training dataset is tagged with the answer the algorithm should come up with on its own. So, a labeled dataset of flower images would tell the model which photos were of roses, daisies and daffodils. When shown a new image, the model compares it to the training examples to predict the correct label.



There are two main areas where supervised learning is useful: classification problems and regression problems.

- Classification problems ask the algorithm to predict a discrete value
- Regression problems look at continuous data

Clean, perfectly labeled datasets aren't easy to come by. And sometimes, researchers are asking the algorithm questions they don't know the answer to. That's where unsupervised learning comes in.

- Clustering: Without being an expert ornithologist, it's possible to look at a collection of bird photos and separate them roughly by species, relying on cues like feather color, size or beak shape. That's how the most common application for unsupervised learning, clustering, works: the deep learning model looks for training data that are similar to each other and groups them together.
- Anomaly detection: Banks detect fraudulent transactions by looking for unusual patterns in customer's purchasing behavior. For instance, if the same credit card is used in California and Denmark within the same day, that's cause for suspicion. Similarly, unsupervised learning can be used to flag outliers in a dataset.