# Explaining Machine Learning to my Granny



Image Source: Google

We all love our grandparents. They give great advice, have answers to almost every question because of their decades of experience. They are awesome except when you are trying to show how to use the phones. They are always ready for adventure, edger to know about new technology and adopting it. My grandma answered my all questions. Now, it's my turn. I am explaining Machine Learning to my granny.

# What is Machine Learning?

**"Machine Learning is a field of study that gives computers the ability to learn without being explicitly programmed. It's like making computers more similar to humans."**

The computers are dumb, they just do what they have told to do. ML is different from the traditional computer science approach. In regular computing, the programmer gives the instructions to get the work done. But with the ML approach, we can give a computer lots of data to learn. It gets trained on that data and produces the output.
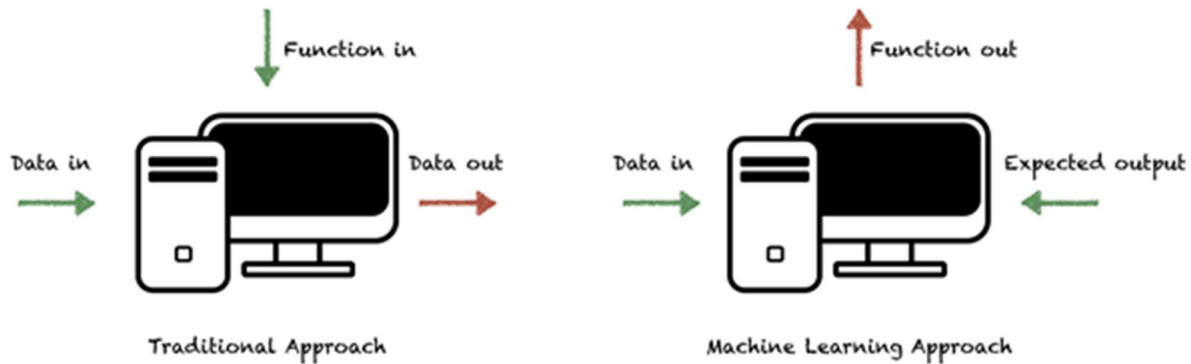
Image Source: Google

The best example of ML is the YouTube recommendation system. It learns about your interests as you watch the videos and suggest the videos.

Most of the time Machine Learning and Artificial Intelligence are considered as the same thing. But Machine Learning is not Artificial Intelligence. It is a subset of AI.

# ● Classification of Machine Learning

Machine learning implementations are classified into three major categories, depending on the nature of the learning.

### 1. Supervised learning :

When an algorithm learns from example data and its output to later predict the correct response when posed with new examples comes under the category of Supervised learning. This approach is similar to human learning under the supervision of a teacher. The teacher provides good examples for the student to memorize, and the student then derives general rules from these specific examples.

### 2. Unsupervised learning :

Whereas when an algorithm learns from plain examples without any associated response, leaving to the algorithm to determine the data patterns on its own. Comparing with human life it is similar like we are learning from our experience and face the upcoming problems.

### 3. Reinforcement learning :

You can accompany an example with positive or negative feedback according to the solution the algorithm proposes comes under the category of Reinforcement learning. Here, an algorithm must make decisions and the decisions bear consequences.

In the human world, it is just like learning by trial and error. Errors help you learn because they have a penalty added (cost, loss of time, regret, pain, and so on), teaching you that a

certain course of action is less likely to succeed than others. An interesting example of reinforcement learning occurs when computers learn to play video games by themselves.

- **CATEGORIZING ON THE BASIS OF REQUIRED OUTPUT**

Another categorization of machine learning task arises when one considers the desired output of a        machine-learned system:

## 1. Classification :

When inputs are divided into two or more classes, and the learner must produce a model that assigns unseen inputs to one or more (multi-label classification) of these classes. This is typically tackled in a supervised way. Spam filtering is an example of classification, where the inputs are email (or other) messages and the classes are "spam" and "not spam".

## 2. Regression :

Which is also a supervised problem, A case when the outputs are continuous rather than discrete.

## 3. Clustering :

When a set of inputs is to be divided into groups. Unlike in classification, the groups are not known beforehand, making this typically an unsupervised task.

- **Blog Link:** [Explaining Machine Learning to my Granny](#)

- **References:**
  1. [GeeksForGeeks.com](#)
  2. [Medium.com](#)