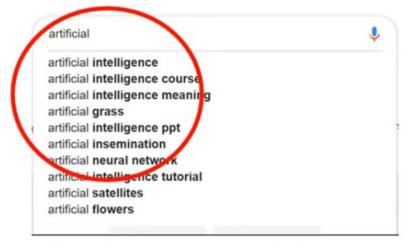
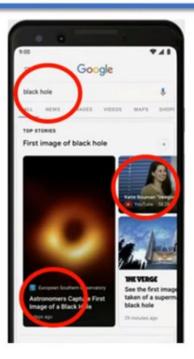
### What is Machine Learning

# Google



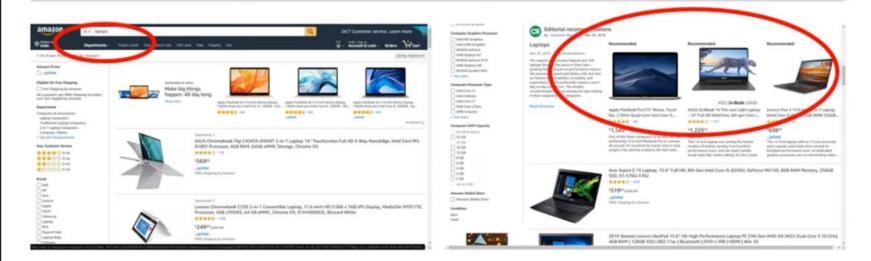
Google Recommendation



Youtube video timing - 4:47

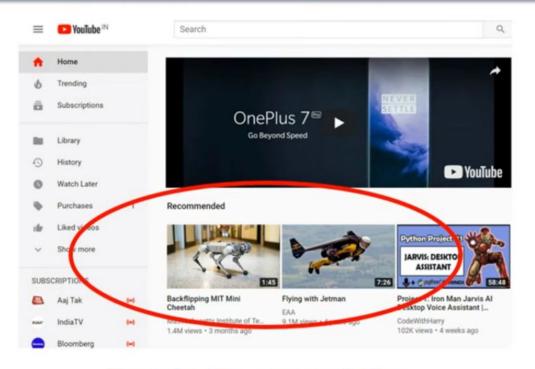
https://youtu.be/lyRPyRKHO8M

### Recommendation System



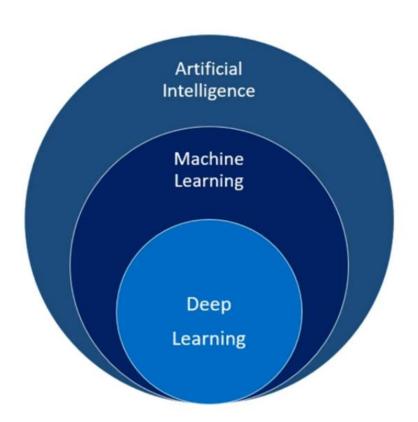
**Amazon Recommendation** 

## Recommendation System



Youtube Recommendation

#### Artificial Intelligence vs Machine Learning vs Deep Learning



#### Traditional Programming vs Machine Learning





#### Formal Definition of Machine Learning

"A computer program is said to learn from experience E with respect to some class of tasks T and performance measure P if its performance at tasks in T, as measured by P, improves with experience E."

-Tom M. Mitchell

#### How Does Machine Learning Works?

Machine Learning algorithm is trained using a training data set to create a model. When new input data(test data) is introduced to the ML algorithm, it makes a prediction on the basis of the model.

The prediction is evaluated for accuracy and if the accuracy is acceptable, the Machine Learning algorithm is deployed. If the accuracy is not acceptable, the Machine Learning algorithm is trained again and again with an augmented training data set.

#### What is Data Mining?

Data mining is the process of discovering patterns in large <u>data</u> <u>sets</u> involving methods at the intersection of <u>machine</u> <u>learning</u>, <u>statistics</u>, and <u>database systems</u>.

Data mining is the analysis step of the "knowledge discovery in databases" process, or "KDD"

#### What is Predictive Modeling?

Predictive modeling is a process that uses <u>data mining</u> and <u>probability</u> to <u>forecast outcomes</u>.