

## **Artificial Interlligence**

Artificial Intelligence, also known as AI, is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal. A subset of artificial intelligence is machine learning, which refers to the concept that computer programs can automatically learn from and adapt to new data without being assisted by humans. Deep learning techniques enable this automatic learning through the absorption of huge amounts of unstructured data such as text, images, or video.

### **Supervised learning**

Supervised learning, as the name indicates, has the presence of a supervisor as a teacher. Basically supervised learning is when we teach or train the machine using data that is well labelled. Which means some data is already tagged with the correct answer. After that, the machine is provided with a new set of examples(data) so that the supervised learning algorithm analyses the training data(set of training examples) and produces a correct outcome from labelled data.

### **Unsupervised learning**

Unsupervised learning is the training of a machine using information that is neither classified nor labeled and allowing the algorithm to act on that information without guidance. Here the task of the machine is to group unsorted information according to similarities, patterns, and differences without any prior training of data.

Unlike supervised learning, no teacher is provided that means no training will be given to the machine. Therefore the machine is restricted to find the hidden structure in unlabeled data by itself.

### **Terminologies related to AI**

Natural Language Processing (NLP), Artificial Intelligence (AI), Machine Learning, Deep Learning, Neural Network, Supervised Learning, Unsupervised Learning, Reinforcement Learning

### **Framework of AI**

Frameworks of AI include Tensorflow, Pytorch, Keras, Theano, Microsoft Cognitive Toolkit, Caffe, Amazon Machine Learning, Torch, Accord.Net, Apache Mahout, Spark Mlib