About AI

AI (Artificial Intelligence) is an advancement in computer thinking where the computer aims to think and behave as humans in rational terms. AI tends to learn in two ways; Supervised Learning and Unsupervised Learning.

Supervised learning is the type of machine learning in which machines are trained using well "labeled" training data, and on the basis of that data, machines predict the output. The labeled data means some input data is already tagged with the correct output. The training data provided to the machines work as the supervisor that teaches the machines to predict the output correctly. It applies the same concept as a student learns in the supervision of the teacher. Supervised learning can be further divided into two types of problems: Regression and Classification.

*Unsupervised learning is a type of machine learning in which models are trained using unlabeled dataset and are allowed to act on that data without any supervision.Unsupervised learning cannot be directly applied to a regression or classification problem because unlike supervised learning, we have the input data but no corresponding output data. The goal of unsupervised learning is to find the underlying structure of the dataset, group that data according to similarities, and represent that dataset in a compressed format.*The unsupervised learning algorithm can be further categorized into two types of problems: Clustering and Dimensionality Reduction

AI can be divided into two types on the basis of ***Capability*** *and* ***Functionality.*** *On the basis of capability it is further divided into 3 types:* ***Narrow AI or Weak AI, General AI, and Super AI.*** *On the basis of functionality it is further divided into 4 types:* ***Reactive Machines, Limited Memory, Theory of Mind, and Self-awareness.*** Many things we study now are related to AI. Things like Expert systems, Logic programming, Swarm intelligence, Turing test, Cognitive Science, Neural networks, Fuzzy logic, Reinforcement management are all within the branch of the big tree '**AI**'. *With the help of AI we can reach guidance in many fields and some of the applications in the Engineering field are Advanced Robots, Big Data, Internet of Things, Image Processing, Natural Language Processing, etc.*

The most popular and commonly used AI frameworks are : **Tensor flow, Microsoft CNTK, Caffee, Theano, Amazon Machine Learning, Torch, Accord.Net, Apache Mahout, Spark MLib, etc.**