

# About<sub>A</sub>*I*

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## 1 About AI

### 1.1 What is AI

Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence.

Examples of AI are

1. Siri,Alexa
2. Self driving cars
3. Conversational Bots
4. Netflix's recommendation

### 1.2 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.

Some examples of supervised learning algorithms

1. Linear regression
2. Logistic regression
3. Support vector machine

### **1.3 Unsupervised Learning**

Unsupervised Learning is a machine learning technique in which the users do not need to supervise the model. Instead, it allows the model to work on its own to discover patterns and information that was previously undetected. It mainly deals with the unlabelled data. Unsupervised Learning Algorithms allow users to perform more complex processing tasks compared to supervised learning. Although, unsupervised learning can be more unpredictable compared with other natural learning methods. Unsupervised learning algorithms include clustering, anomaly detection, neural networks, etc.

### **1.4 Technologies related to AI**

1. Natural Language generation
2. Speech recognition
3. Robotic process automation
4. Machine learning platforms
5. Deep learning platforms
6. Virtual agents

### **1.5 Frameworks for AI**

1. Tensorflow
2. Caffe
3. Theano
4. Tournch
5. Accord.Net
6. Spark MLlib