# **Week 1 Assignment**

1. **What is Machine Learning**

* Machine learning is a part of artificial intelligence that helps computers learn from data and find patterns without being directly told what to do. This allows them to make predictions or decisions based on new information. It's used in many areas like recognizing images or voices, understanding language, giving recommendations (like movies or products), spotting fraud, managing investments, and automating jobs.

1. **What is supervised machine learning algorithm**

* Supervised machine learning is a type of machine learning where a computer learns from labelled data. This means the data includes both the input (like a picture or a sentence) and the correct answer (like the name of the object in the picture or the meaning of the sentence).
* The model studies this data to learn the relationship between inputs and outputs. Later, it can use what it learned to make predictions on new, unseen data.

1. **What is regression and classification**

* In machine learning regression and classification are two types of problems in supervised learning
* **Regression :-**
* The main goal of regression is to predict the continuous value ( a number )
* Predicting house prices, temperature, or a person’s age based on input data.
* **Classification :-**
* The main goal of classification is to predict a category or class lable
* Identifying whether an email is spam or not, or classifying animals in photos as “cat” or “dog.”