#WEEK-1#

1. What is ML?

Machine Learning (ML) is a branch of artificial intelligence that allows computers to learn from data and improve their performance without being explicitly programmed. Instead of following fixed rules, ML models analyse patterns in the data to make predictions or decisions. For example, ML helps in recommending movies, recognizing speech, detecting spam emails, or even diagnosing diseases by learning from past examples. The more data it gets, the better it becomes at making accurate predictions.

1. What is supervised ML algorithm?

A **supervised machine learning algorithm** is a type of ML where the model is trained on a labelled dataset meaning that each training example includes both the input data and the correct output. The algorithm learns by comparing its predictions to the actual answers and adjusting itself to improve accuracy.

1. What is regression and classification?

**Regression** and **classification** are two main types of problems in supervised machine learning:  
**Regression** is used when the output is a **continuous value**.  
**Classification** is used when the output is a **category or class**.  
In short:

* Regression = Predict numbers.
* Classification = Predict categories.