Week1 Assessment

What is Machine Learning?

Machine learning is a branch of Artificial Intelligence that focuses on developing models and algorithms. Training a machine to learn from data, identify the relationships within datasets, and predict outcomes based on the data is known as Machine learning model. In simple words, ML teaches the systems to think and understand like humans by learning from the data.

Types of machine learning

1. Supervised learning: The algorithms learn from labeled data.
2. Unsupervised learning: The model works on unlabeled data.
3. Semi-supervised learning: A hybrid approach that uses a small amount of labelled data and large amount of unlabeled data.
4. Reinforcement learning: Trains algorithms to make a sequence of decisions by rewarding desired behaviors and punishing undesired ones.

What is supervised Machine learning algorithm?

A supervised machine learning algorithm is type of algorithm that uses labelled data where all the inputs and their corresponding outputs are properly mapped, and the output column is known. There are two main categories of supervised learning that are Classification and Regression.

What is Regression and Classification?

Regression algorithm:

A Regression algorithm is a type of supervised machine learning algorithm used when you want to predict the output column which is continuous in nature. For example, predicting the price of a house based on its size, location, and amenities, or forecasting the sales of a product.

Classification algorithm:

A Classification algorithm is a type of supervised machine learning algorithm used when you want to predict the output column which is categorical in nature. For example, classifying emails as spam or not spam, or predicting whether a patient has a high risk of heart disease.