**1. What is Machine Learning (ML)?**

Machine Learning is a subset of artificial intelligence (AI) that enables systems to learn from data and make predictions or decisions without being explicitly programmed. Instead of using hard-coded rules, ML algorithms analyze patterns in data, improve their performance over time, and make data-driven decisions. It is widely used in applications like recommendation systems, fraud detection, image recognition, and natural language processing.

**2. What is a Supervised Machine Learning Algorithm?**

Supervised Machine Learning is a type of ML where the algorithm is trained on a labeled dataset. This means that for each input in the training data, the corresponding correct output is provided. The algorithm learns the relationship between inputs and outputs so it can predict the output for new, unseen data. Examples include linear regression, decision trees, and support vector machines. Supervised learning is typically used for classification and regression tasks.

**3. What is Regression and Classification?**

* **Regression** is a type of supervised learning used when the output variable is continuous. For example, predicting the price of a house based on its features is a regression problem. The goal is to predict a real value.
* **Classification** is another type of supervised learning where the output variable is categorical. It involves assigning input data to one of several predefined categories or classes. For example, identifying whether an email is spam or not is a classification problem.