

Machine Learning Viva Questions - Quick Guide

1. What is Machine Learning?

Machine Learning (ML) is a way to make computers learn from data and make decisions or predictions without being explicitly programmed.

It is like teaching a child using examples instead of rules.

2. What is Regression?

Regression is a supervised learning method used to predict continuous values like house price or temperature.

Examples:

- Linear Regression: Predicts using a straight line.
- Polynomial Regression: Predicts with curves (x^2 , x^3 , etc.).

3. What is a Decision Tree?

A Decision Tree is a tree-like model that splits data into branches based on conditions.

It is used for classification and regression problems.

Each leaf node gives a final output (decision).

4. Common Types of Plots and Their Uses

- Histogram: Shows distribution of data.
- Boxplot: Highlights spread and outliers.
- Scatter Plot: Displays relation between two variables.
- Line Plot: Shows trends over time.
- Heatmap: Shows correlation between features.
- Bar Chart: Compares different categories.
- Pie Chart: Shows parts of a whole.
- Confusion Matrix: Shows predicted vs actual.
- Tree Diagram: Visualizes decision paths.