

1. What is Machine Learning?

Machine learning is a branch of AI that allows computers to learn from data and improve their performance over time without being explicitly coded for specific tasks.

2. Explain the concept of supervised learning.

Supervised learning uses labeled datasets to train the model so it can make predictions on unseen data.

3. What is the difference between classification and regression?

Classification deals with predicting categories like spam or not spam, while regression is about predicting numerical values like the price of a house.

4. Define overfitting and how to prevent it.

Overfitting happens when a model is too complex and fits the training data too well, leading to poor generalization on new data. Regularization and cross-validation can reduce overfitting.

5. What is deep learning?

Deep learning is a form of machine learning that uses neural networks with multiple layers to analyze complex data patterns.