Question: What is Machine Learning?

Answer: Machine Learning is a subset of artificial intelligence focused on developing statistical algorithms and models that enable computers to learn and improve from experience without being explicitly programmed.

Question: What is the difference between supervised learning and unsupervised learning?

Answer: In supervised learning, the model learns from labeled data, while in unsupervised learning, it learns from unlabeled data, discovering hidden structures or distributions within the data.

Question: How is the performance of a Machine Learning model evaluated?

Answer: The performance of a Machine Learning model is evaluated through metrics such as accuracy, recall, precision, F1 score, and mean squared error, depending on the type of problem.

Question: How can overfitting be prevented in Machine Learning?

Answer: Some techniques to prevent overfitting include cross-validation, regularization, reducing the complexity of the model, increasing the training data size, and using ensemble methods.

Question: What are some common Machine Learning algorithms?

Answer: Some common Machine Learning algorithms include linear regression, logistic regression, decision trees, support vector machines, k-nearest neighbors, and neural networks.