

Machine Learning – Short Notes

Machine Learning (ML) is a subset of Artificial Intelligence that enables systems to learn from data and improve performance without being explicitly programmed.

Types of Machine Learning

1. Supervised Learning: Uses labeled data. Examples include Linear Regression, Logistic Regression, Decision Trees, and Support Vector Machines.
2. Unsupervised Learning: Uses unlabeled data. Examples include K-Means Clustering and Hierarchical Clustering.
3. Reinforcement Learning: The model learns through rewards and penalties. Example: Q-Learning.

Common Applications

Machine Learning is widely used in recommendation systems, spam detection, image recognition, fraud detection, and natural language processing.

Basic Workflow

Data Collection → Data Preprocessing → Model Training → Model Evaluation → Prediction