Machine Learning Overview

Machine learning is a branch of artificial intelligence that focuses on building systems that learn from data. It has applications in various fields including computer vision, natural language processing, and recommendation systems.

Supervised Learning

Supervised learning involves training models on labeled data. The model learns to map inputs to outputs based on example pairs. Common algorithms include linear regression, logistic regression, support vector machines, and neural networks.

Unsupervised Learning

Unsupervised learning deals with unlabeled data. The system tries to learn the structure of the data without explicit guidance. Examples include clustering algorithms like K-means and dimensionality reduction techniques like PCA.