Title: Machine Learning Overview

Introduction

Machine learning is a part of AI that uses data and algorithms to mimic human learning, and improve its accuracy over time. It automates the building of analytical models.

Types of Machine Learning

1. Supervised Learning: This involves training a model on a labeled dataset, where each example is paired with an output label.
2. Unsupervised Learning: The model is given data without labels and tries to learn the patterns from the data.
3. Reinforcement Learning: This involves training a model to make decisions by rewarding good decisions and punishing bad ones.

Common Algorithms

1. Linear Regression: A method to model the relationship between a dependent and one or more independent variables.
2. Decision Trees: Used for classification and regression in supervised learning.
3. K-Means Clustering: An unsupervised algorithm that groups similar data points into clusters.

Applications of Machine Learning

Machine learning is used in fields like healthcare, finance, and marketing. In healthcare, it helps in diagnosing diseases, and in finance, it helps to detect fraudulent transactions.