

Introduction to Machine Learning

Machine learning is a field of artificial intelligence that focuses on building algorithms that can learn from and make predictions on data. It has applications in a wide range of domains including healthcare, finance, and transportation.

Machine learning can be divided into three major types:

1. **Supervised Learning:** In supervised learning, the algorithm is trained on a labeled dataset. The model learns the mapping between input-output pairs, and the goal is to predict the output for new, unseen inputs.
2. **Unsupervised Learning:** In unsupervised learning, the algorithm is given input data without labels. The model attempts to find hidden structures or patterns in the data.
3. **Reinforcement Learning:** This type of learning involves training an agent to make sequences of decisions by rewarding it for correct actions and penalizing it for incorrect ones.