

Introduction to Machine Learning

Machine learning is a branch of artificial intelligence that involves the use of algorithms and statistical models to allow computers to perform tasks without explicit instructions. The model "learns" from data patterns and improves over time. There are several types of machine learning: supervised learning, unsupervised learning, and reinforcement learning.

Supervised Learning

Supervised learning involves training a model using labeled data. Each input is paired with the correct output, and the model learns to map inputs to outputs. Common algorithms used in supervised learning include linear regression, decision trees, and support vector machines.

Unsupervised Learning

Unsupervised learning, unlike supervised learning, involves training a model on data that is not labeled. The model tries to identify hidden patterns or intrinsic structures in the data. Examples of unsupervised learning include clustering and association.

Conclusion

Machine learning has become a pivotal technology in various industries, enabling innovations in areas like healthcare, finance, and autonomous vehicles.