

Machine Learning (ML) is a subset of artificial intelligence that enables systems to learn and improve from experience without explicit programming. ML involves training algorithms on data to recognize patterns, make predictions, and automate decision-making processes. Techniques include supervised learning, where models learn from labeled data, and unsupervised learning, which identifies hidden patterns in unlabeled data. Applications of ML range from recommendation systems and fraud detection to autonomous vehicles and predictive analytics. The evolution of ML has been accelerated by advancements in computational power and the availability of large datasets. However, challenges like overfitting, interpretability, and ethical considerations remain critical areas of research.