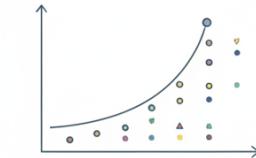
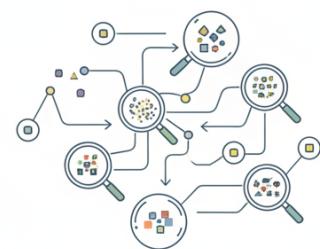
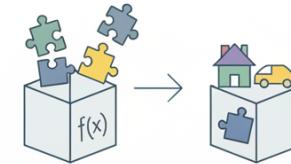


Machine Learning: Empowering Data-Driven Insights

Generated with Smart PPT

Machine Learning: Core Concepts

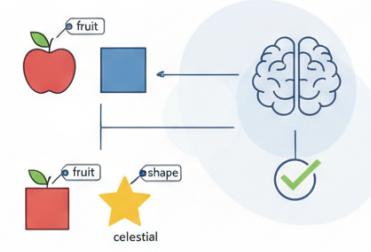
- Systems learn from data without explicit programming.
- Utilizes algorithms to detect patterns and predict outcomes.
- A subfield of Artificial Intelligence (AI).
- Employs statistical models for data-driven learning.



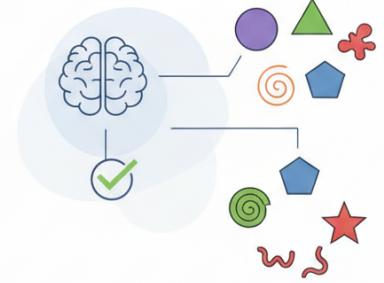
Core Paradigms of Machine Learning

- Supervised Learning: Learns from labeled datasets.
- Unsupervised Learning: Finds patterns in unlabeled data.
- Reinforcement Learning: Learns through trial and error.
- Each paradigm suits different problem types.

Core Paradised
Machine Learning

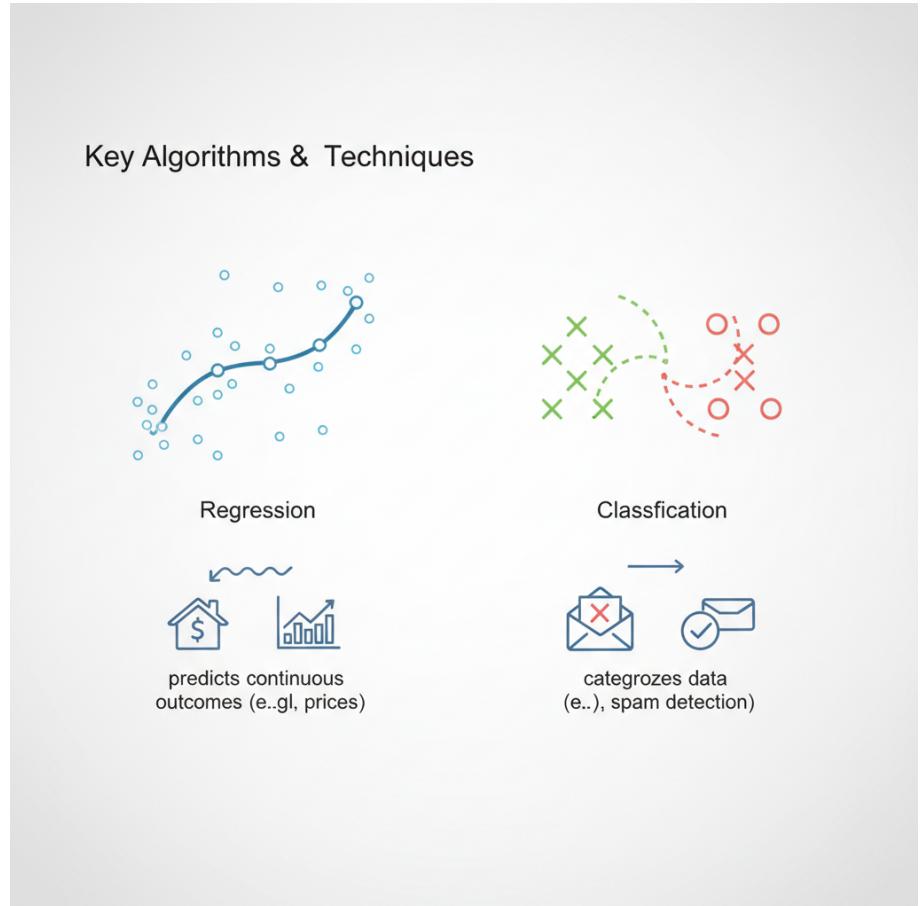


Core Paradigms of
Machine Learning



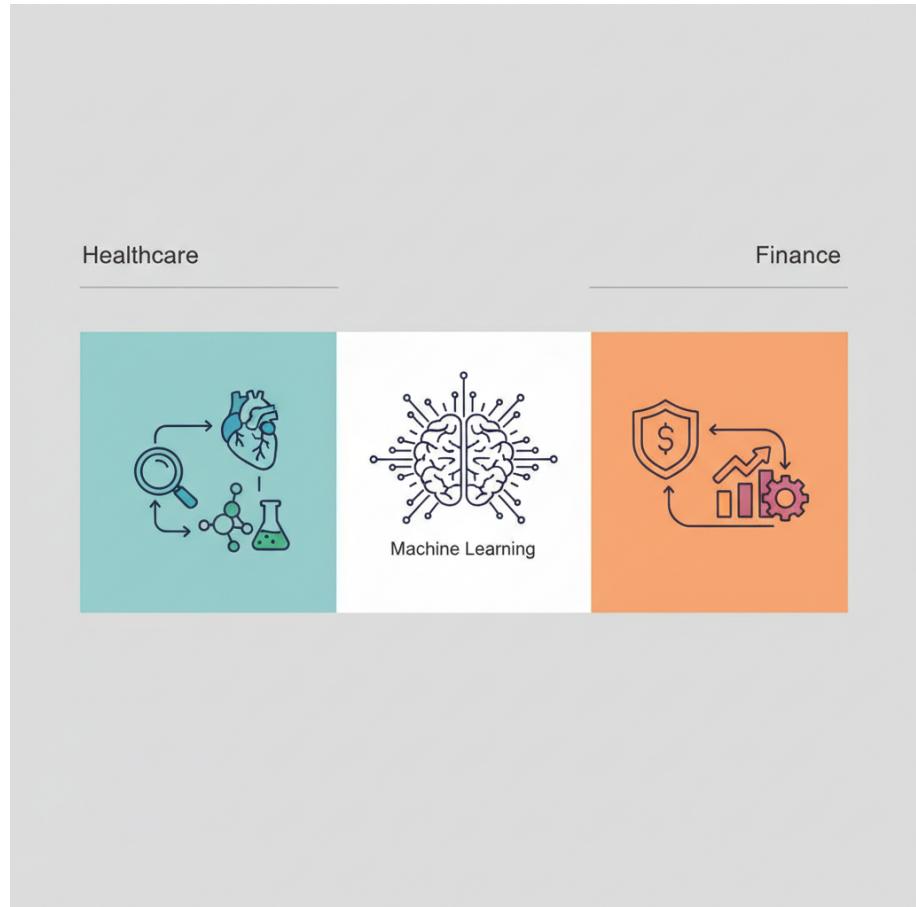
Key Algorithms and Techniques

- Regression predicts continuous outcomes (e.g., prices).
- Classification categorizes data (e.g., spam detection).
- Clustering groups similar data points together.
- Neural Networks mimic human brain structure.



Applications Across Industries

- Healthcare: Disease diagnosis and drug discovery.
- Finance: Fraud detection and algorithmic trading.
- Retail: Recommendation engines and personalized marketing.
- Autonomous Vehicles: Perception and decision-making.



Future of Machine Learning

- Continued rise of Deep Learning and AI.
- Increased focus on explainable AI (XAI).
- Ethical considerations and bias mitigation.
- Transforming industries, driving innovation globally.

