

Machine Learning: Transforming leadership for the future

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- Explosion of data
- Need for precision and speed
- The role of machine learning

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Agenda

- ML fundamentals
- Use cases of ML

Machine learning

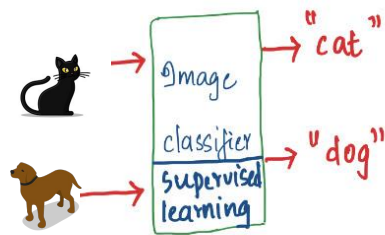
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Types of ML

- Supervised learning
 - Learn from labeled data
 - Example

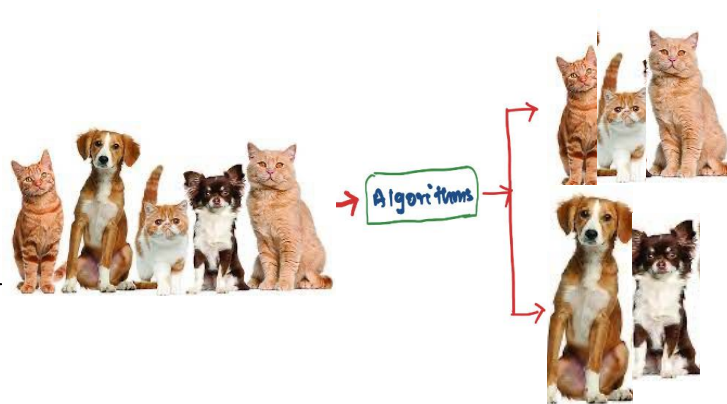


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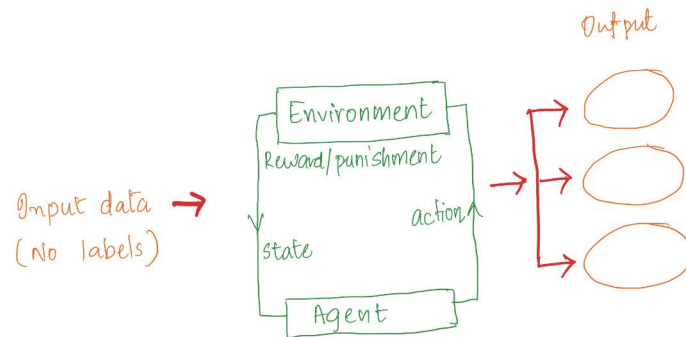


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- Reinforcement learning
 - Learn by experimenting and getting feedback
 - Example



Use Cases of Machine Learning in Decision-Making

- Predictive Analytics:
- Risk Assessment:
- Process Optimization:
- Personalized Recommendations

Key Steps:

- Data Collection: Raw data is collected from sources like sensors, apps, or systems.
- Data Preprocessing: Cleaning and transforming data into usable formats.
- Model Training: Training ML algorithms on historical data to learn patterns.
- Prediction: Applying the trained model to make real-time decisions.
- Feedback Loop: Using outcomes to improve the model over time.

Advantages of ML in decision making

Accuracy and Precision:

- Reduces human error and bias.

Scalability:

- Handles complex datasets that grow exponentially.

Speed:

- Processes millions of variables in seconds.

Cost Savings:

- Automates repetitive decision-making tasks, saving time and resources.

Challenges

- Amount and quality of data
- Lack of transparency
- Maintenance
- Privacy

Thank you!