Types of Machine Learning — Table Format

Type of ML	What It Means	Data Type	How It Learns	Common Examples
Supervised Learning	Learns from labeled data (input + correct output)	Labeled	Model compares predictions with correct answers and adjusts	Price prediction, Spam detection, Image classification
Unsupervised Learning	Learns patterns from data without any labels	Unlabeled	Finds hidden structure, groups, or patterns	Clustering customers, Market segmentation, Anomaly detection
Reinforcement Learning	Learns by interacting with an environment and receiving rewards	No labels (Reward-based)	Trial and error; maximizes total reward	Game-playing AI, Robots, Self-driving cars
Semi-Supervised Learning	Mix of few labeled + many unlabeled samples	Partly labeled	Uses both types to improve accuracy	Text classification, Speech recognition
Self-Supervised Learning	Model generates its own labels from data	Unlabeled	Learns by predicting part of data from other parts	NLP models, Vision models
Deep Learning	Uses neural networks with many layers	Any (but large)	Automatically learns features from raw data	Face recognition, Object detection, ChatGPT