Important Models

Category	Algorithms
Supervised Learning	Linear Regression, Multiple Linear Regression, Polynomial Regression, Ridge Regression, Lasso Regression, Elastic Net, Logistic Regression, Decision Trees, Random Forest, Gradient Boosting, XGBoost, LightGBM, CatBoost, Naive Bayes, Support Vector Machines (SVM), k-Nearest Neighbors (k-NN), Linear Discriminant Analysis, Quadratic Discriminant Analysis
Unsupervised Learning	K-Means Clustering, Hierarchical Clustering, DBSCAN, Principal Component Analysis (PCA), Singular Value Decomposition (SVD), Gaussian Mixture Models, Self-Organizing Maps
Reinforcement Learning	Q-Learning, SARSA (State-Action-Reward-State-Action), Deep Q Network (DQN), Policy Gradients, Actor-Critic Methods, Monte Carlo Methods
Neural Networks and Deep Learning	Perceptron, Multi-layer Perceptrons (MLP), Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Long Short-Term Memory Networks (LSTMs), Generative Adversarial Networks (GANs), Transformer Networks, Autoencoders
Ensemble Methods	Bagging, Boosting, Stacking, Random Forest, Gradient Boosting Machines (GBM), AdaBoost, XGBoost, LightGBM, CatBoost
Dimensionality Reduction	Principal Component Analysis (PCA), Linear Discriminant Analysis (LDA), t-Distributed Stochastic Neighbor Embedding (t-SNE), Uniform Manifold Approximation and Projection (UMAP)

In [ ]: