ML Models:

Statistical Models:

1. **Linear Regression:**
    - **Type:** Supervised Learning (Regression)
    - **Example:** Predicting house prices based on features like square footage, number of bedrooms, etc.
2. **Logistic Regression:**
    - **Type:** Supervised Learning (Classification)
    - **Example:** Predicting whether an email is spam or not based on various features.
3. **Decision Trees:**
    - **Type:** Supervised Learning (Classification and Regression)
    - **Example:** Classifying whether a passenger survived or not based on features in a Titanic dataset.
4. **Random Forest:**
    - **Type:** Ensemble Learning (Bagging)
    - **Example:** Predicting customer churn based on various features in a telecom dataset.
5. **Support Vector Machines (SVM):**
    - **Type:** Supervised Learning (Classification and Regression)
    - **Example:** Classifying images as cats or dogs in computer vision.
6. **Naive Bayes:**
    - **Type:** Supervised Learning (Classification)
    - **Example:** Text classification, such as spam detection or sentiment analysis.

Non-Statistical Models:

1. **Neural Networks:**
    - **Type:** Deep Learning
    - **Example:** Image recognition in convolutional neural networks (CNNs) or natural language processing in recurrent neural networks (RNNs).

2. **K-Nearest Neighbors (KNN):**
    - **Type:** Instance-Based Learning
    - **Example:** Recommender systems where items are recommended based on similarity to items liked by the user.
3. **Genetic Algorithms:**
    - **Type:** Evolutionary Algorithms
    - **Example:** Optimization problems, such as finding the best parameters for a complex system.
4. **K-Means Clustering:**
    - **Type:** Unsupervised Learning (Clustering)
    - **Example:** Grouping customers based on their purchasing behavior.
5. **Principal Component Analysis (PCA):**
    - **Type:** Dimensionality Reduction
    - **Example:** Reducing the dimensionality of data while preserving important features.
6. **Reinforcement Learning:**
    - **Type:** Learning from Interaction
    - **Example:** Training an agent to play games or control a robot through trial and error.