

Classification

Classification

- In machine learning, **classification** refers to a predictive modeling problem where a class label is predicted for a given example of input data.

Types of classification

- Binary Classification
- Multi-Class Classification
- Multi-label Classification
- Imbalanced Classification

Binary Classification

- Binary Classification refers to those classification tasks which consist of only two class labels.
- Example:
 1. Spam detection
 2. Conversion(Buy or not) and many more.

Multi-class Classification

- Multi-class Classification refers to those classification tasks which consist of more than two class labels.
- Example:
 1. Face detection
 2. Plant Species Detection and many more.

Multi-label Classification

- Multi-label classification refers to those classification tasks that have two or more class labels, where one or more class labels may be predicted for each example.
- Example:
 1. Photo Classification
 2. Cell Classification and many more

Imbalanced Classification

- Imbalanced classification refers to classification tasks where the number of examples in each class is unequally distributed.
- Example:
 1. Fraud Detection
 2. Medical diagnosis and many more

Popular Algorithms in Classification:

- k-Nearest Neighbors.
- Decision Trees.
- Naive Bayes.
- Random Forest.
- Gradient Boosting.