Bank Marketing Decision Tree Classifier Report

1. Dataset Overview

The dataset contains 45211 records and 17 attributes, including customer demographic and behavioral data.

The target variable 'y' indicates whether the client subscribed to a term deposit (1: yes, 0: no).

2. Data Preprocessing

All categorical variables were label-encoded using scikit-learn's LabelEncoder. The dataset was then split into

training and test sets with an 80-20 ratio.

3. Model Training

A Decision Tree Classifier was trained with a maximum depth of 5 using the Gini criterion.

4. Model Evaluation

Accuracy: 89.35%

Confusion Matrix:

[[7644 308]

 [655 436]]

Classification Report:

	precision	recall	f1-score	support
0	0.92	0.96	0.94	7952
1	0.59	0.40	0.48	1091
accuracy			0.89	9043
macro avg	0.75	0.68	0.71	9043
weighted avg	0.88	0.89	0.88	9043

5. Decision Tree Visualization