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ASSIGNMENT 8 : DECISION TREES

Implement Machine Learning methods to classify data using Decision Trees

The dataset details :

	Variance	Skewness	Curtosis	Entropy	Class
0	3.62160	8.6661	-2.8073	-0.44699	0
1	4.54590	8.1674	-2.4586	-1.46210	0
2	3.86600	-2.6383	1.9242	0.10645	0
3	3.45660	9.5228	-4.0112	-3.59440	0
4	0.32924	-4.4552	4.5718	-0.98880	0

The decision tree trained has the following parameters :

```
DecisionTreeClassifier(class_weight=None, criterion='gini', max_depth=None,
                       max_features=None, max_leaf_nodes=None,
                       min_impurity_decrease=0.0, min_impurity_split=None,
                       min_samples_leaf=1, min_samples_split=2,
                       min_weight_fraction_leaf=0.0, presort=False,
                       random_state=None, splitter='best')
```

Result:
Confusion matrix and classification report

```
[[167   4]
 [  0 104]]
              precision    recall  f1-score   support

           0       1.00      0.98      0.99       171
           1       0.96      1.00      0.98       104

    accuracy                           0.99       275
   macro avg       0.98      0.99      0.98       275
weighted avg       0.99      0.99      0.99       275
```