**DECISION TREE**

A Decision tree is used for both classification and regression .It can be used to visually and explicitly represent decisions and decision making. The decision trees are built using heuristic called “Recursive Partitioning”.

Algorithms used:-

1. C5.0 ( Uses Entropy)
2. CART(Uses GINI Index)
3. ID3 (Uses Entropy and Information Gain)

As the name goes, it uses a tree-like model of decisions.A decision tree is drawn upside down with its root at the top. It contains an **internal node**, based on which the tree splits into branches(**edges)**. The end of the branch that doesn’t split anymore is the decision(**leaf**).

The performance of a tree can be increased by pruning*.*It involves removing the branches that make use of features having low importance.

**Data Used :**

1. Company dataset - for knowing the attribute that causes high sale using descision tree.
2. Fraud dataset - for treating those who have taxable\_income <= 30000 as "Risky" and others are "Good" using descision tree.

**Programming:-** Python

**The Codes regarding Decision Tree with Two different business problems company dataset ,fraud dataset are present in this Repository in detail.**