Name Toke Pratiksha Raju

Expt. Title Write a program to implement decision tree using Python (programming lang. of your choice.

Class FYMCA Batch B-4 Performed on ____

Roll No. 180 Expt. No. 03 Submitted on ____

Remarks ____ Returned on ____

✱ What is decision tree?

Decision tree is a supervised learning technique that can be used for both classification and regression problems, but mostly it is preferred for solving classification problem. It is a tree-structure classifier, where internal nodes represent the output

It is graphical represantation for getting all the possible solution to a problem / decision based on given condition. This is works surprisingly well in most of the cases.

✱ ID3 Algorithm

- If all example have the same label:
  - return a leaf with that label.

- Else if there are no feature left to test:
  - return a leaf with the most common label

- Else:
  - choose the feature f̂ that maximise the info gain of s to be next node using eqn (12-2)
  - add branch from node for each possible value f̂ in f.

  - For each branch
    * calculate SF by remaining f̂ from the best set of feature
    * Recursively call the algorithm with SF, to compute the given relative to current set of example