Predicting Political Party using Decision Trees

Assignment 2
2808ict Intelligent Systems
Bennett Taylor
S5095512

Introduction:

The Decision Tree is a classification algorithm that operates how it sounds. It builds a diagram of branches using statistical probability to show a likely outcome.

This project aims to predict what political party a person belongs to based on their voting choices.

Architecture:

The algorithm builds the tree as it searches for the class of each test point. It chooses where to split the list by calculating the information gain of each column. The algorithm then splits the column with the highest information gain, finds which side the test point belongs to and repeats this process using this new list. The decision tree stops when there is no more columns to split or the list is filled with only one party

Conclusion:

This project exhibits how powerful decision trees can be. Being an easy and effective algorithm to understand and visualize possible options/outcomes in any domain.