

Question 7: For each of the two real datasets that come with this project, explain how their Decision Trees could be used along with other software (another algorithm, or a user facing GUI) to solve some problem. For the cars dataset, you should suggest a similar dataset and analyze how having a classifier such as a Decision Tree could be useful to something like a website selling products. For the Connect4 dataset, suggest some way in which the classifier could be incorporated with one of the past algorithms we have learned about to make a better Connect4 playing bot. You should discuss both for several sentences, and concretely describe what the dataset could contain and how the corresponding Decision Tree could be used to solve the given problem.

The decision trees created with these data sets would work great with filter algorithms for users to narrow down available options based on preference. Similar to how an online shop would work, a user could slowly narrow down a larger list of items into a smaller list by filtering on color, then size, then price, etc. A similar dataset to the cars dataset would be a dataset on houses for sale. The user could use a decision tree to identify houses within a certain area, then price range, then pick out individual features and so on and so forth. The connect 4 game analysis could be utilized in identifying heuristic approaches to improving game performance. After enough games and with enough data in the decision tree, it could be used to find strategies and tactics with much greater likelihood of success. This would be very useful in predicting future outcomes in the game as well.