The decision tree used for classifying car data set can be used to secondhand car dealer websites to help user make decisions. The data set contains searches that all users make, with attribute including mileage, safety, doors, mpg, price, style, etc., and each search corresponds to a class, which is a car model that the user is most interested. After a big amount of data is collected, we can use the data set to build a decision tree to give user recommendations. Specifically, when a user makes a search on the website, the system will collect his preferences, and apply these attribute values to the decision tree. The decision tree will finally lead to a car model that best meets the user’s requirement, which will be displayed to the user as the recommended model.

We can apply the minimax algorithms to the connect4 decision tree making. We can view the connect4 game is played by two players: max and min, and because the search space is huge, we need to use an evaluation to limit the depth that max can look ahead. Since the game is won if 4 consecutive pieces are connected, we check all neighboring four consecutive pieces (horizontal, vertical, and diagonal). We add 1 if the piece is ours, and subtract 1 if it is the opponent’s; if it is empty we do nothing. The evaluation function is just the sum of all evaluations. Since the game board is 7 \* 6, there are 69 4-connected-pieces combinations thus 69 different attributes. Each set of the dataset results in a move decision by the minimax algorithm, and we can use the minimax to decide which move to take by our decision tree.