When your assignment is complete, please answer the questions in this text file and upload it to I-Learn.

1. Please provide a link to your classifier in your public GitHub repo.

* <https://github.com/gundie88/CS450/tree/master/Week_4>
* Prove\_4 is my decision tree and the file tree\_output is what my tree looks like.

2. Briefly describe your overall approach to the task and highlight the most difficult part of this assignment.

* I decided to do the implementation of the ID3 decision tree, I started off by making a decision tree class and filling it with the appropriate methods. I knew that I was going to need different classes and functions to pull this implementation off. The hardest part of this assignment was figuring out how to implement recursion into my code.

3. Describe the dataset that you used.

* I used the car dataset that I cleaned up from the last prove assignment we had.

4. Describe your results on this dataset. (e.g., What was the size of the tree? How did your implementation compare to existing implementations? How did your decision tree compare to your kNN classifier)

* Since I created this decision tree specifically for this data the accuracy was 100%. I did make a function to run the sk-learn decision tree classifier and that had an accuracy of about 82% and only misclassified 96 samples.

5. If applicable, please describe anything you did to go above and beyond and the results you saw.

6. Please select the category you feel best describes your assignment:

1 - Some attempt was made

2 - Developing, but significantly deficient

3 - Slightly deficient, but still mostly adequate

4 - Meets requirements

5 - Shows creativity and excels above and beyond requirements

7. Provide a brief justification (1-2 sentences) for selecting that category.

* I spent a lot of time trying to implement the decision tree, I created a way of displaying it so you could visualize it, and I also have the accuracy of my decision tree classifier and sk-learns in my code.