Lecture 4: *"Decision Trees"*

Book Chapter

Please read the *Chapter 6* **"Decision Trees"** without the subchapter "Regression" and answer the following Questions.

Keep in mind: If you answer these questions and write a detailed summary, you won't need to read these chapters again while preparing for the exam

Video Nugget

A nice introduction in decision trees can be found here including things like the Gini score!

Questions

1. What are the benefits of *Decision Trees*?
2. How does a *Decision Tree* predict a class?
3. What does the Gini score measure?
4. Why are *Decision Trees* called "White Box" models?
5. How does the CART training algorithm work?
6. What ist the overall prediction complexity? And why?
7. What ist the overall training complexity? And why?
8. What is "Entropy"?
9. Why do we use the parameter *max_depth*?
10. What is *pruning*?
11. What is a limitation of *Decision Trees*?

Homework Assignment

Please work on the exercises given in Decision_Tree_MNIST_task.ipynb