# TDT4171 - Assignment 4

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April 2016

## Discussion of findings

Based on the results it there doesn't seem to matter much which importance function to choose performance wise. The random function seems to be fluctuating around a mean that is equal to the gain functions performance. I've gotten anything from 18/28 to 23/28 correct from the random function, while the gain function stays constant at 20/28 correct when running the program several times. If stability is an issue then the gain function is better.

Now, these are just my results, and I suspect the gain function is implemented wrong as one would expect it to perform better than the random one. I haven't been able to figure out if and why it's wrong. It could also just be that the training data is not that good.

## Results

Output from console:

```
Random importance
Correct: 22/28
Tree structure:
value: 5
        value: 0
                value: 1
                value: 3
                        value: 1
                                value: 2
                                        value: 1
                                        value: 2
                                value: 6
                                        value: 4
                                                value: 1
                                                value: 2
                                        value: 1
                        value: 1
```

```
          value: 1


Information gain importance
Correct: 20/28
Tree structure:
value: 0
        value: 1
        value: 4
                value: 2
                        value: 1
                                value: 1
                                value: 2
                        value: 6
                                value: 3
                                        value: 5
                                                value: 1
                                                value: 2
                                        value: 1
                                value: 1
                value: 2
```