TDT4171 Artificial Intelligence Methods

Importance

```
C:\Users\rh183_000\Documents\NTNU\ai met\øv4>python ex4.py
tree Test for amount of correct out of 28:
26
```

```
C:\Users\rh183_000\Documents\NTNU\ai met\øv4>python ex4.py
results for 10 000 random trees
average:    21
minimum:    10
maxi:    28
```

From the result obtained it is clear that the importance function based on information gain is much better than the random importance function. On average after a couple of hundred random trees the random importance managed to classify 21 of the 28 examples. Worst case was 10 and best case 28. When the importance function based on information gain is used it is always 26 out of 28 correct.

When random importance is used it does not return the same result each time.

When the learner based information gain runs several times it always returns the same result, 26 out of 28.
Picture created with http://ironcreek.net/phpsyntaxtree from output of getTree() function.

1