



COMP4388: Machine Learning  
Fall 2019/2020  
Assignment 1: Decision Tree Learning

In this assignment you will implement a Decision Tree algorithm. You should implement the decision tree from the scratch including the Entropy and Information gain functions. Please do not import libraries from other machine learning algorithms and run it!

You can use Java or C or C++ to implement this assignment. The format of the input file should follow WEKA's standard ARFF file<sup>1</sup>.

As for testing, you can try it on the Mushroom dataset (you can download it from: <https://www.dropbox.com/s/spsmssgf12g88w/mushroom.arff?dl=0>)

You should provide the code in your submission as well a running interface of the algorithm. Having provided the training and test set, your program should also provide the classification accuracy of the test.

The deadline of the assignment is 23 November 2019. A message will be sent on Ritaj so that you can submit your code. The discussion time will be announced later.

If you have any questions, please feel free to ask during the lecture or by contacting me via Ritaj or email: [rjarrar@birzeit.edu](mailto:rjarrar@birzeit.edu)

Good luck!  
Dr. Radi Jarrar

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<sup>1</sup> <https://www.cs.waikato.ac.nz/~ml/weka/arff.html>