CDS503: Machine Learning
Academic Session: Semester 1, 2022/2023

School of Computer Sciences, USM, Penang

LAB EXERCISE (LAB 3)

Lab 3 Exercise

Look at the bank note authentication data (banknote.csv) that is uploaded in eLearn. Look at each attribute and see what type of data it has. The data can also be downloaded from: http://archive.ics.uci.edu/ml/datasets/banknote+authentication

Attribute Information:

- variance of Wavelet Transformed image
- skewness of Wavelet Transformed image
- curtosis of Wavelet Transformed image
- entropy of image
- class

Question 1

Explore the data and answer the following:

- What is the **type** of attributes in the data?
- Explore the data to check, whether is it **balance**?
- What attribute is **useful** and what is **not**? **why**?

Question 2

Experiment with the decision tree algorithm introduced in this lab to **predict** the class of the bank note authentication data (banknote.csv). Use **default** parameter configurations. Answer the following questions:

- Try using **1 other parameter** configurations and compare them to their **default** configuration. How much they differ?

Post your solution on Lab 03 Submission on **elearn@usm**. Make sure to include your name and lab# on the submission post.

Format: in .ipynb

The due date is **17 November 2022 (5.00pm)**