

# REPORT

## LAB 2

### DECISION TREE WITH SCIKIT-LEARN

Grading:

No.	Specifications	Score(%)
1.	Preparing the datasets	20
2.	Building the decision tree classifiers	20
3.	Evaluating the decision tree classifiers	
	Classification report and confusion matrix	20
	Comments	10
4.	The depth and accuracy of a decision tree	
	Trees, tables and charts(did not provide graphviz)	10
	Comments	10
Total		90

#### ➤ Building the decision tree classifiers

- The accuracy fluctuating from 45-55% when shuffle(random state)
- These decision tree perform better when train state above 60% and below 80%
- Test state need big enough for calculating precision and accuracy

#### ➤ Evaluatin the decision tree classifiers

max_depth	None	2	3	4	5	6	7
Accuracy	54.41829	52.1611	52.16104	51.1101	52.7753	53.45618	54.5219

- With 80/20 training/test set the accuracy always above 50%
- Lowest accuracy at depth 4, 'U' shape graph