**PROGRAMMING ASSIGNMENT 2**

**DECISION TREES**

By

Thota, Sai Abhishek – SXT210056

Gauri, Rahul – RXG200002

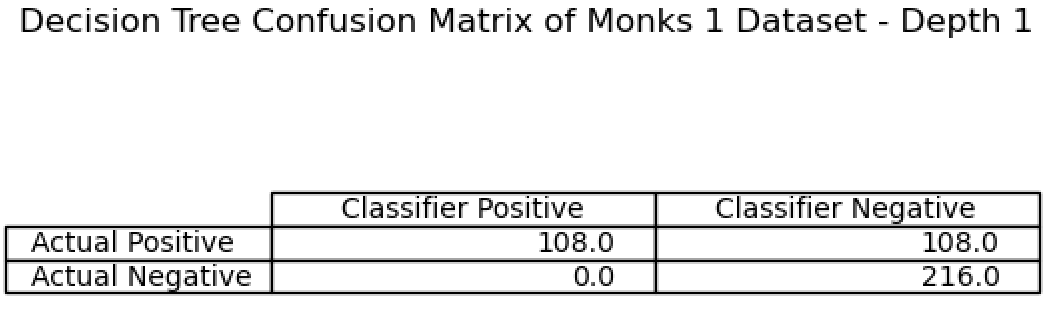
Part 1 – Learning Curves

Chart, line chart

Description automatically generated

We have implemented the learning curves of Monks Dataset using Decision Tree algorithm and we have obtained the three learning curves for Monks 1, Monks 2 and Monks 3 datasets. We have the training examples plotted in red and the testing examples plotted in blue for each of the 3 monks training sets.

Part 2 – Weak Learners



Table

Description automatically generated

Part 3 – scikit-learn

Table

Description automatically generated

Diagram, schematic

Description automatically generated

The above confusion matrix is the confusion matrix generated by scikit-learn tree and preprocessing.

The decision tree using scikit-learn has been visualized using Graphviz and the decision tree has been saved in Monks.pdf.

Part 4 – Using megaGymset.csv dataset

Table

Description automatically generated

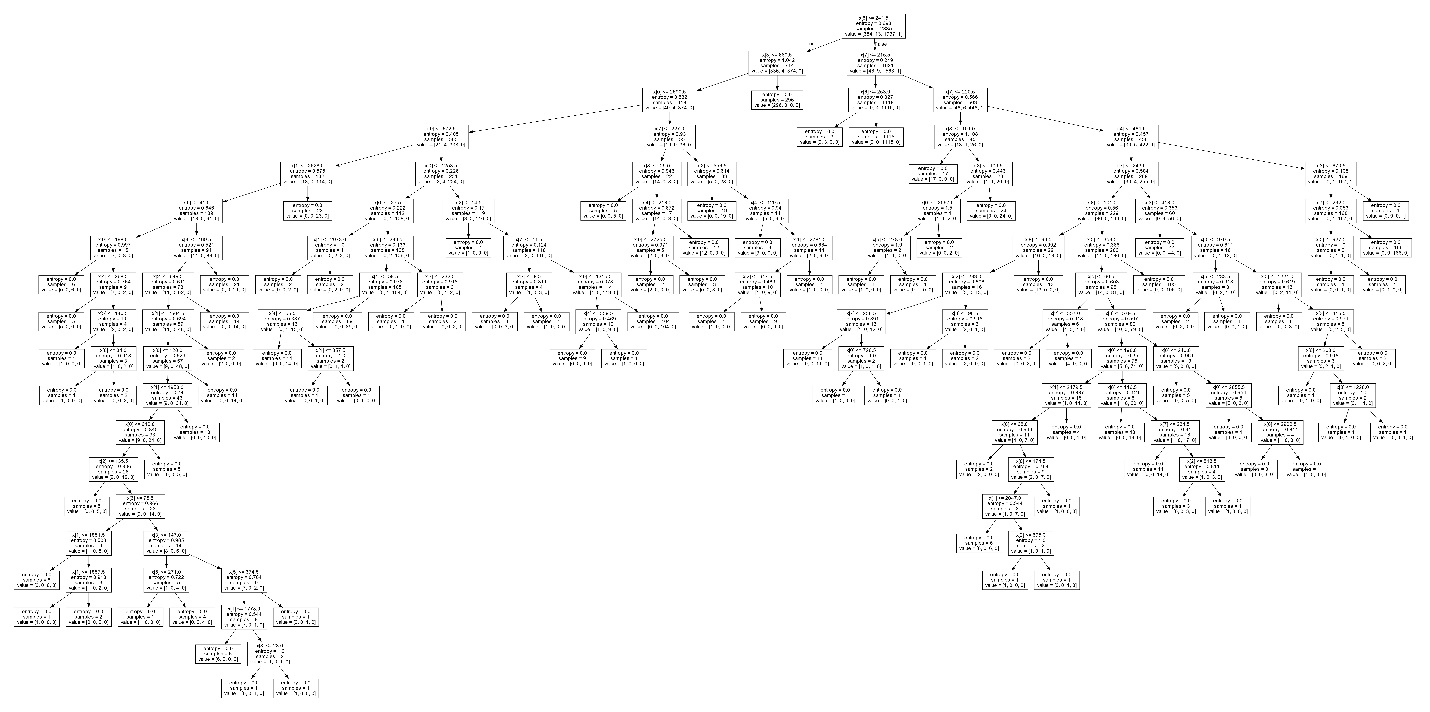
Table

Description automatically generated

We have generated Confusion Matrix of megaGymset.csv using our implementation of Decision Tree algorithm.

Table

Description automatically generated



We have designed the Confusion Matrix of megaGymset.csv using scikit-learn tree and preprocessing modules.

The decision tree has been visualized using Graphviz and the decision tree has been saved in Mega Gymset.