
Question 1

Part a

Step 1 : Tree Size = 386 (45 Percent Of Whole Train Dataset)
Step 1 : Accuracy On Train Dataset = 83.650000 Percent
Step 1 : Accuracy On Test Dataset = 80.080000 Percent

Step 2 : Tree Size = 395 (45 Percent Of Whole Train Dataset)
Step 2 : Accuracy On Train Dataset = 83.890000 Percent
Step 2 : Accuracy On Test Dataset = 79.980000 Percent

Step 3 : Tree Size = 383 (45 Percent Of Whole Train Dataset)
Step 3 : Accuracy On Train Dataset = 83.730000 Percent
Step 3 : Accuracy On Test Dataset = 79.730000 Percent

Average Accuracy On Train Dataset = 83.756667 Percent
Average Accuracy On Test Dataset = 79.930000 Percent

Part b

Step 1 : Tree Size = 443 (55 Percent Of Whole Train Dataset)
Step 1 : Accuracy On Train Dataset = 84.600000 Percent
Step 1 : Accuracy On Test Dataset = 79.920000 Percent

Step 2 : Tree Size = 436 (55 Percent Of Whole Train Dataset)
Step 2 : Accuracy On Train Dataset = 84.760000 Percent
Step 2 : Accuracy On Test Dataset = 80.100000 Percent

Step 3 : Tree Size = 439 (55 Percent Of Whole Train Dataset)
Step 3 : Accuracy On Train Dataset = 84.820000 Percent
Step 3 : Accuracy On Test Dataset = 80.180000 Percent

Average Accuracy On Train Dataset = 84.726667 Percent
Average Accuracy On Test Dataset = 80.066667 Percent

Step 1 : Tree Size = 496 (65 Percent Of Whole Train Dataset)
Step 1 : Accuracy On Train Dataset = 85.240000 Percent
Step 1 : Accuracy On Test Dataset = 80.600000 Percent

Step 2 : Tree Size = 495 (65 Percent Of Whole Train Dataset)
Step 2 : Accuracy On Train Dataset = 85.330000 Percent
Step 2 : Accuracy On Test Dataset = 80.230000 Percent

Step 3 : Tree Size = 531 (65 Percent Of Whole Train Dataset)
Step 3 : Accuracy On Train Dataset = 85.530000 Percent
Step 3 : Accuracy On Test Dataset = 80.440000 Percent

Average Accuracy On Train Dataset = 85.366667 Percent
Average Accuracy On Test Dataset = 80.423333 Percent

Step 1 : Tree Size = 596 (75 Percent Of Whole Train Dataset)
Step 1 : Accuracy On Train Dataset = 86.170000 Percent
Step 1 : Accuracy On Test Dataset = 80.380000 Percent

Step 2 : Tree Size = 559 (75 Percent Of Whole Train Dataset)
Step 2 : Accuracy On Train Dataset = 86.290000 Percent
Step 2 : Accuracy On Test Dataset = 80.830000 Percent

Step 3 : Tree Size = 565 (75 Percent Of Whole Train Dataset)
Step 3 : Accuracy On Train Dataset = 85.910000 Percent
Step 3 : Accuracy On Test Dataset = 80.350000 Percent

Average Accuracy On Train Dataset = 86.123333 Percent
Average Accuracy On Test Dataset = 80.520000 Percent

Tree Size = 713 (100 Percent Of Whole Train Dataset)
Accuracy On Train Dataset = 87.540000 Percent
Accuracy On Test Dataset = 80.580000 Percent

Elapsed time is 485.863367 seconds.

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