Machine Learning Assignment-2 Report

Classification using Decision Tree

Dataset Used:

- cardio.csv
- cardio_noise.csv

Results:

Noiseless Dataset	Before Pruning	After Pruning
Accuracy	0.6355	0.6955
Macro Precision	0.635351872667416	0.7013120692522685
Macro Recall	0.6356999555844751	0.6990266683644157

Noisy Dataset	Before Pruning	After Pruning
Accuracy	0.44625	0.6066666666666667
Macro Precision	0.4459869281045752	0.6067203344600605
Macro Recall	0.44619776721602006	0.6066447406798352

Pruning significantly improves the accuracy, precision, and recall of the Decision Tree model on both noiseless and noisy datasets, with a more pronounced effect on the noisy dataset.