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CMPN-B

23102B0025

ML : Assignment - 3

Q.1. ① Regression tree uses variance reduction / mean Squared Error (MSE) to choose splits.

Classification tree uses gini impurity or entropy to maximize class purity.

② In regression tree, a new instance is assigned the mean of the target values of the training samples in that leaf.

In classification trees, a leaf predicts based on the majority class among the training samples in that leaf.

③ C A R T can naturally model non-linear relationships and interactions between the features without requiring the modeller to pre-specify them which effectively captures cutoff-based and combined effects influencing placements and package that linear or logistic models may miss in this scenario.