There are several terms and concepts explained throughout the document you provided. Here is a brief definition and explanation for each:

**Intercept** In linear regression, the intercept is the value of the dependent variable when all independent variables are zero. It can be thought of as the starting point of the regression line.

**Classification (Logistic Regression)** A statistical method used to predict the probability of a binary outcome (yes or no, true or false).

**Decision Tree** A decision support tool that uses a tree-like model to map decisions and their possible consequences.

**Decision Tree Terms**

* Root Node: The initial node in the decision tree.
* Decision Node: A node in a decision tree where a decision is made based on a feature.
* Splitting: Dividing a node into sub-nodes based on a decision rule.
* Leaf/Terminal Node: A node with no children or sub-nodes.
* Branch: A section of a decision tree connecting nodes.
* Pruning: Eliminating branches and nodes to simplify the tree.
* Parent / Children: The relationship between nodes and their sub-nodes.

**Splitting Trees** The process of dividing a node in a decision tree into two or more sub-nodes based on a feature, aiming to increase information gain or reduce uncertainty.

**Information Gain** A metric used to measure the reduction in entropy (uncertainty) achieved by splitting a dataset based on a specific feature.

**Gini Impurity** A measure of the probability of misclassifying a randomly chosen element from a set.

**Entropy** A measure of uncertainty or disorder in a dataset. In decision trees, it is used to determine the optimal splits.

**Gain Ratio** A modification of information gain used in decision trees to select the best feature to split on.

**Random Forests** An ensemble learning method that combines multiple decision trees to improve prediction accuracy and reduce overfitting.

**Ensemble Learning** A machine-learning approach where multiple models are combined to solve a problem.

**Hyperparameters** Parameters used to control the learning process of a machine learning model, typically set before training begins.

**Grid Search** A method for hyperparameter tuning where different combinations of hyperparameters are tested, and the combination with the best performance is selected.

**Cross-Validation** A technique used to evaluate the performance of a machine learning model on unseen data by partitioning the data into subsets for training and testing.