

API Documentation

HoeffdingOptTree

class HoeffdingOptTree(max_option_path=5, grace_period=200, split_confidence=1e-07, secondary_split_confidence=0.1, tie_threshold=0.05, binary_split=False, remove_poor_atts=False, leaf_prediction='nba', nominal_attributes=None)

Parameters

- **max_option_path** int (default=5) - number of options reachable by a single example
- **grace_period** (int (default=200)) – Number of instances a leaf should observe between split attempts.
- **split_confidence** (float (default=0.0000001)) – Allowed error in split decision, a value closer to 0 takes longer to decide.
- **secondary_split_confidence** (float (default=0.1)) – Allowed error in secondary split decision
- **tie_threshold** (float (default=0.05)) – Threshold below which a split will be forced to break ties.
- **binary_split** (boolean (default=False)) – If True, only allow binary splits.
- **remove_poor_atts** (boolean (default=False)) – If True, disable poor attributes.
- **leaf_prediction** (string (default='nba')) – Prediction mechanism used at leafs.
'mc' - Majority Class
'nb' - Naive Bayes
'nba' - Naive Bayes Adaptive
- **nominal_attributes** (list, optional) – List of Nominal attributes. If empty, then assume that all attributes are numerical.

Methods

- **__init__**([max_path_option, ...]) – HoeffdingOptTree class constructor.
- **_attempt_to_split**(node: ActiveLearningNode, parent: SplitNode, parent_idx: int) – Attempt to split a node.
- **compute_hoeffding_bound**(range_val, confidence, n) – Compute the Hoeffding bound, used to decide how many samples are necessary at each node.
- **deactivate_all_leaves**() – Deactivate all leaves.
- **get_model_measurements**() – Return the parameters of our tree.
- **get_model_description**() – Walk the tree and return its structure in a buffer.
- **get_votes_for_instance**(X) – Get class votes for a single instance.
- **measure_tree_dept**() – Calculate the depth of the tree.
- **_new_learning_node**([initial_class_observations=None]) – Create a new learning node.
- **new_split_node**(split_test, class_observations) – Create a new split node.
- **partial_fit**(X, y, [classes, sample_weight]) – Incrementally trains the model.
- **predict**(X) – Predicts the label of the X instance(s).
- **predict_proba**(X) – Predicts probabilities of all label of the X instance(s).
- **reset**() – Reset the Hoeffding Option Tree to default values.