

A THE MAXIMUM SUM DISPLAYED GROUPS' WEIGHTED SCORES CRITERION

Let \mathcal{W} is a weighting function that maps any input tree's internal node to a non-negative number. If $I(\mathbb{S}, i, j)$ is an indicator function that is 1 if summary tree \mathbb{S} displays the node $V(i, j)$ and 0 otherwise then: $SDGWS(\mathbb{S}) = \sum_i \sum_j I(\mathbb{S}, i, j) \mathcal{W}(i, j)$ is the “sum of displayed groups' weighted scores” for a tree where i indexes all of the input trees and j indexes each non-root internal node in tree i . Preference for this tree is referred to as the maximum sum displayed groups' weighted scores criterion (MSDGWS criterion). The summary tree constructed by the propinquity pipeline is a greedy heuristic for finding a tree that maximizes this score when the weights for a node are determined by the tree's weight and the difference in weighting is so large that displaying one node from a highly ranked tree is preferred to displaying all of the nodes in the trees with lower rank.