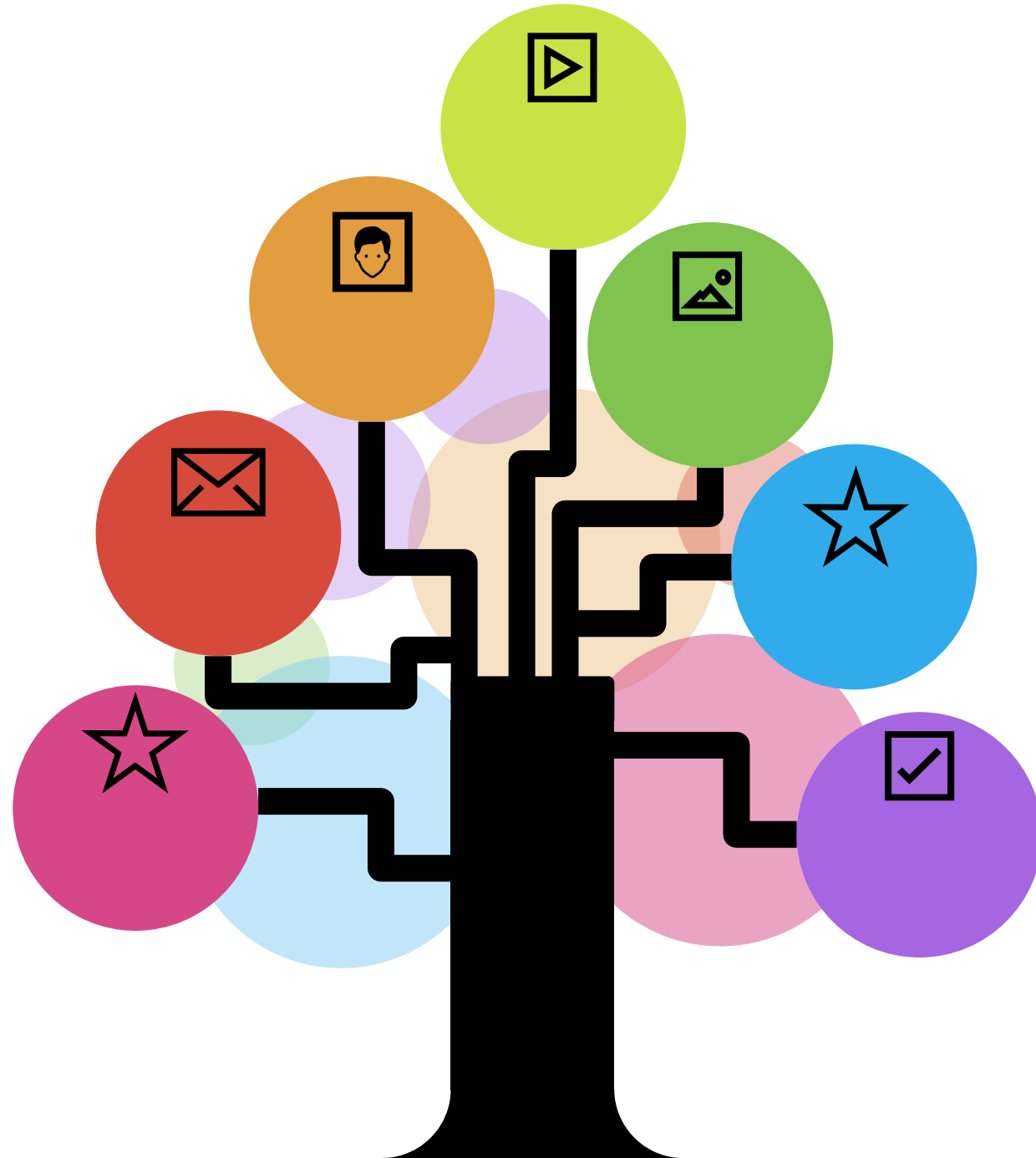# Decision Trees

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How to regulate decision tree complexity and avoid overfitting?

1. Regularization is a more sophisticated approach to prevent overfitting. Combining decision tree with regularization, to become as random forest classifiers. The random forest could correct the overfitting of decision trees.

2. By pruning the decision tree to limit the depth of decision tree or the number of leaves at each leaf node,

1) Pre-pruning: to prune the tree before the tree perfectly classifies the training set.

2) Post-pruning: to prune the tree after the tree perfectly classify the training set.