

Artificial Intelligence II

Exercise 11

Q1. Decision Trees

You are given points from 2 classes, shown as '+'s and '.'s. For each of the following sets of points,

1. Draw the decision tree of depth at most 2 that can separate the given data completely, by filling in binary predicates (which only involve thresholding of a single variable) in the boxes for the decision trees below. If the data is already separated when you hit a box, simply write the class, and leave the sub-tree hanging from that box empty.
2. Draw the corresponding decision boundaries on the scatter plot, and write the class labels for each of the resulting bins somewhere inside the resulting bins.

If the data can not be separated completely by a depth 2 decision tree, simply cross out the tree template.



