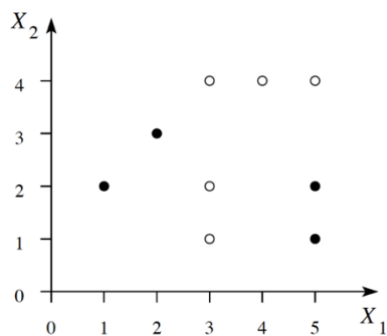


COMP4432 Machine Learning

Tutorial Questions on k-Nearest Neighbor

1. For the dataset depicted below, draw the decision boundary formed by using k -nearest neighbor classifier when
(a) $k=1$
(b) $k=3$.

Here, only a *rough* drawing (sketch) of the boundary is needed.



2. Suppose you are asked to enhance the performance of decision tree by combining it with the k -nearest neighbor method. Think about a conceptually sound, potentially workable solution and describe your idea. Comment particularly on the decision boundary of your hybrid model.