

1 Neural Networks

test accuracy is 0.928

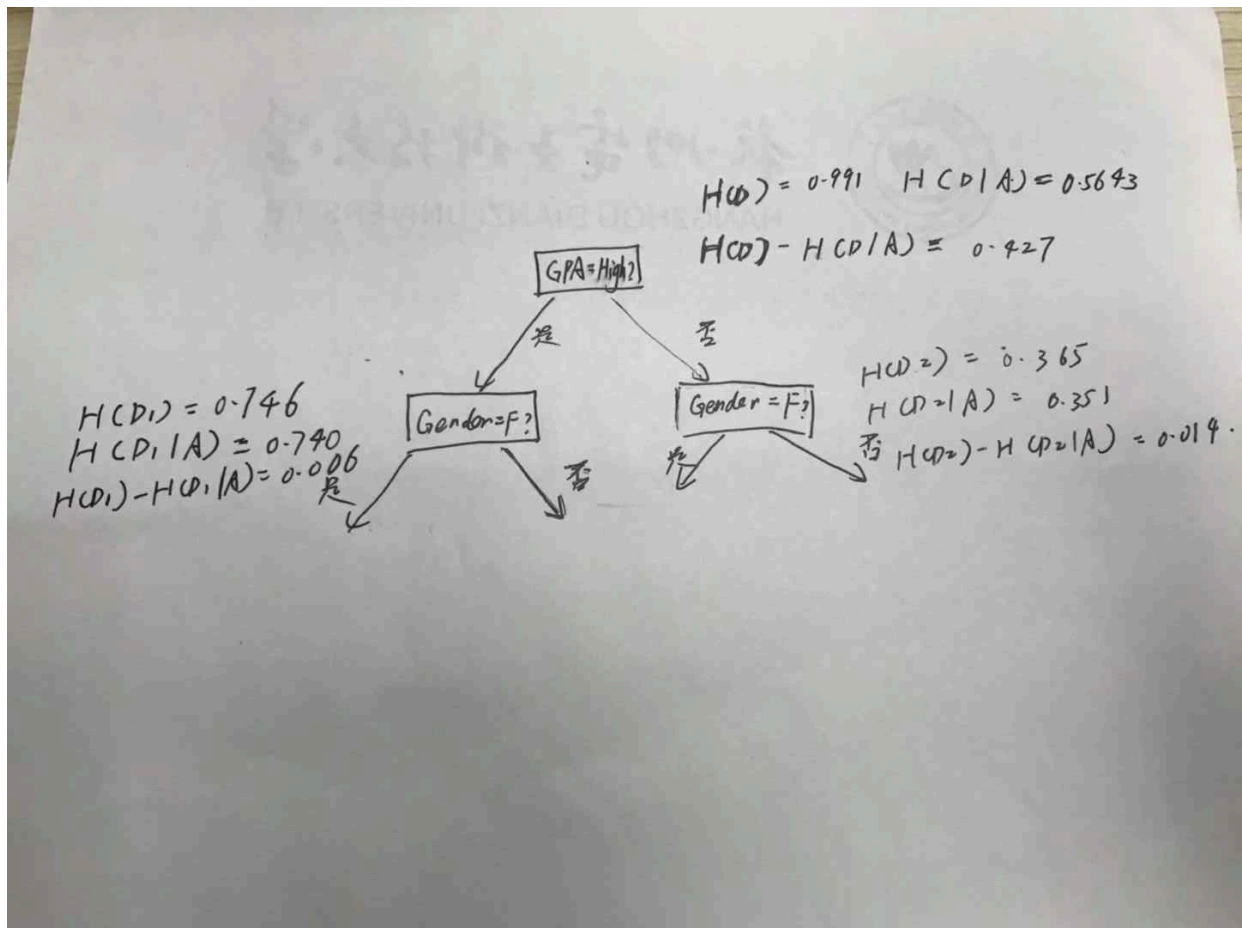
2 K-Nearest Neighbor

(b)

when we choose small k , always leads to low bias and high variance. and large k always leads to high bias and low variance. So we should choose the right answer for the special condition.

Escaping for overfitting we always choose the 5-10 for k . (1 maybe lead to overfit)

3 Decision Tree and ID3



4 K-Means Clustering

(b) You can make the initial center selection a fixed coordinate. For example, I can divide the data into k parts when the k parameter is used, and use the average coordinate of each parts as the k th initial center.

(d) If I use $k = 64$ compress ratio is 0.25