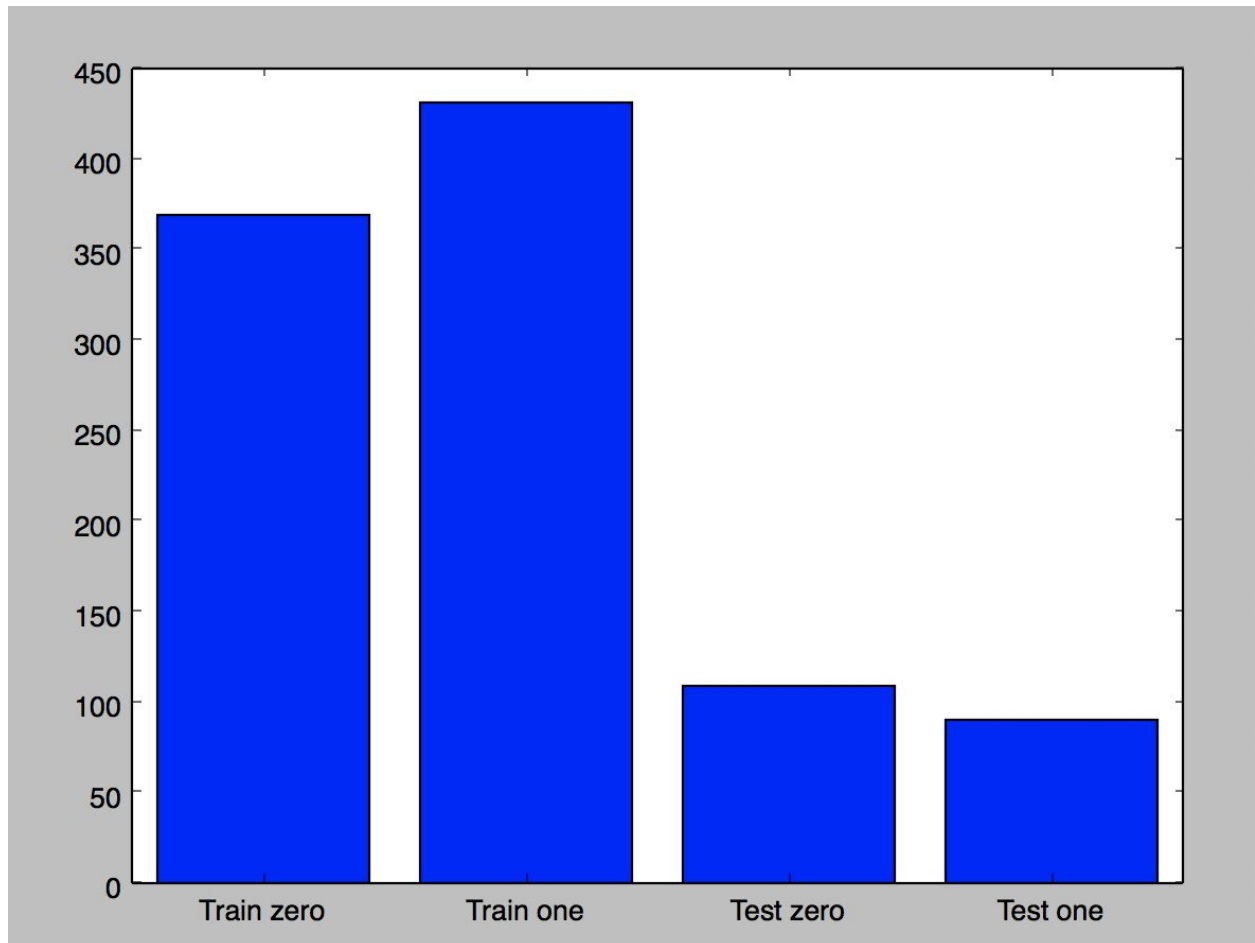# REPORT: K-Nearest Neighbours
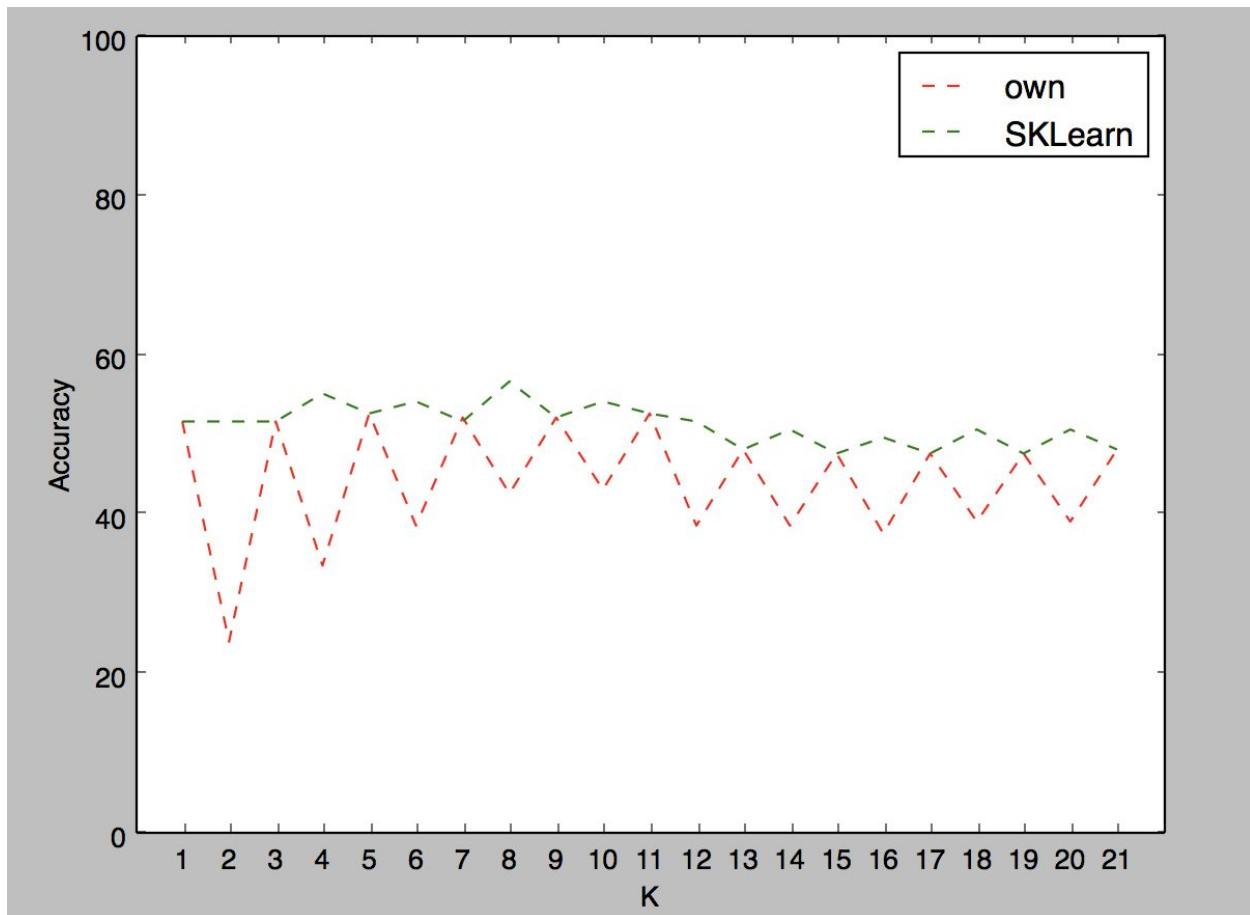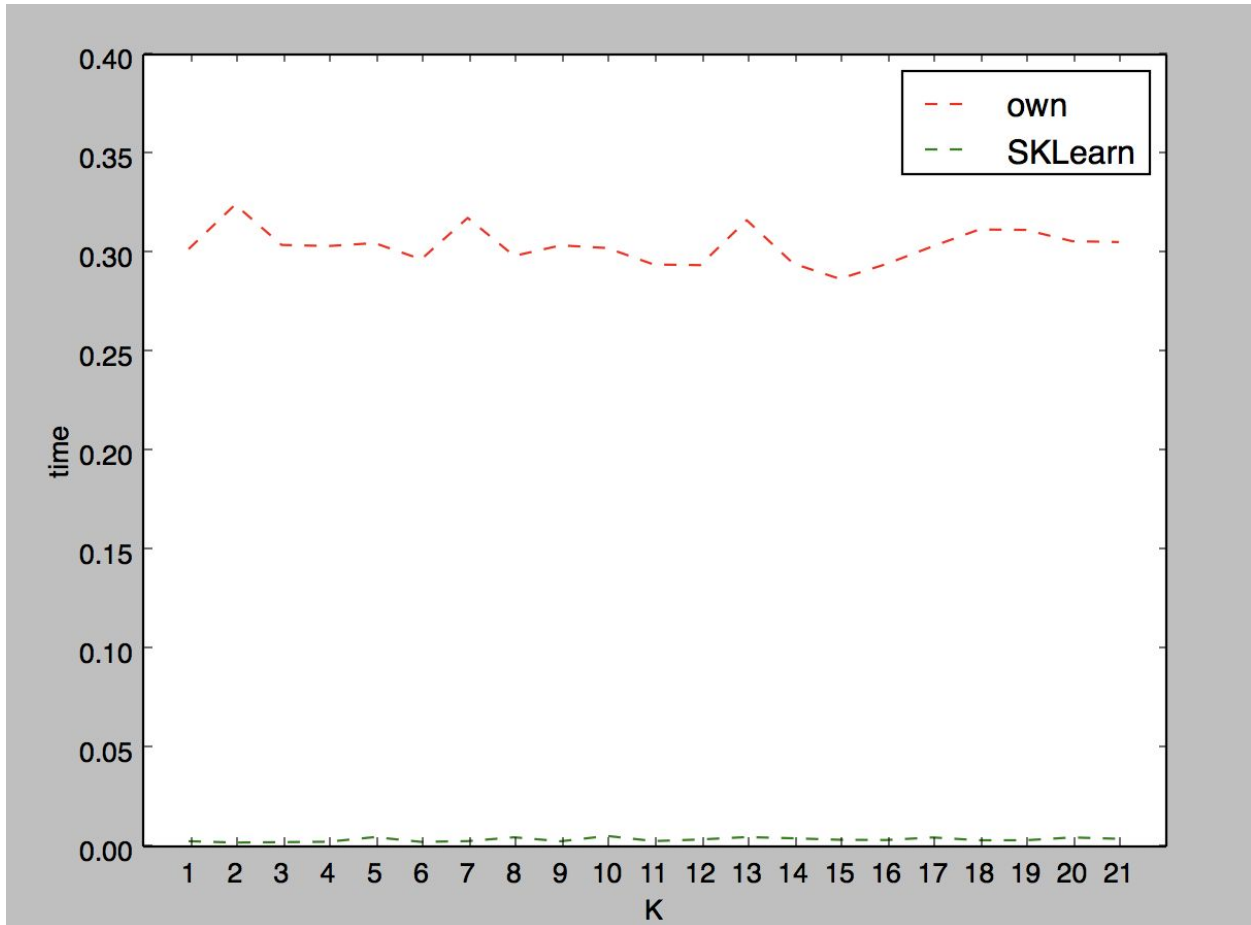
Data distribution bar graph

Inferences
- The split is almost equal because of 0.5 probability.
- The splits is 80:20 .

Accuracy vs K

- For odd values, Accuracy is exactly same.
- For even values, it is implementation dependent. If count is equal among k neighbours is considered as misclassification, then accuracy is significantly low(Which is in the case of our own implementation where as it isn't for sklearn).
- The maximum accuracy is still less 60% which is not good for prediction purposes.

Time vs K

- The time taken is significantly higher because of inefficient implementation O(N*2 logN) where as sklearn uses efficient data structure.