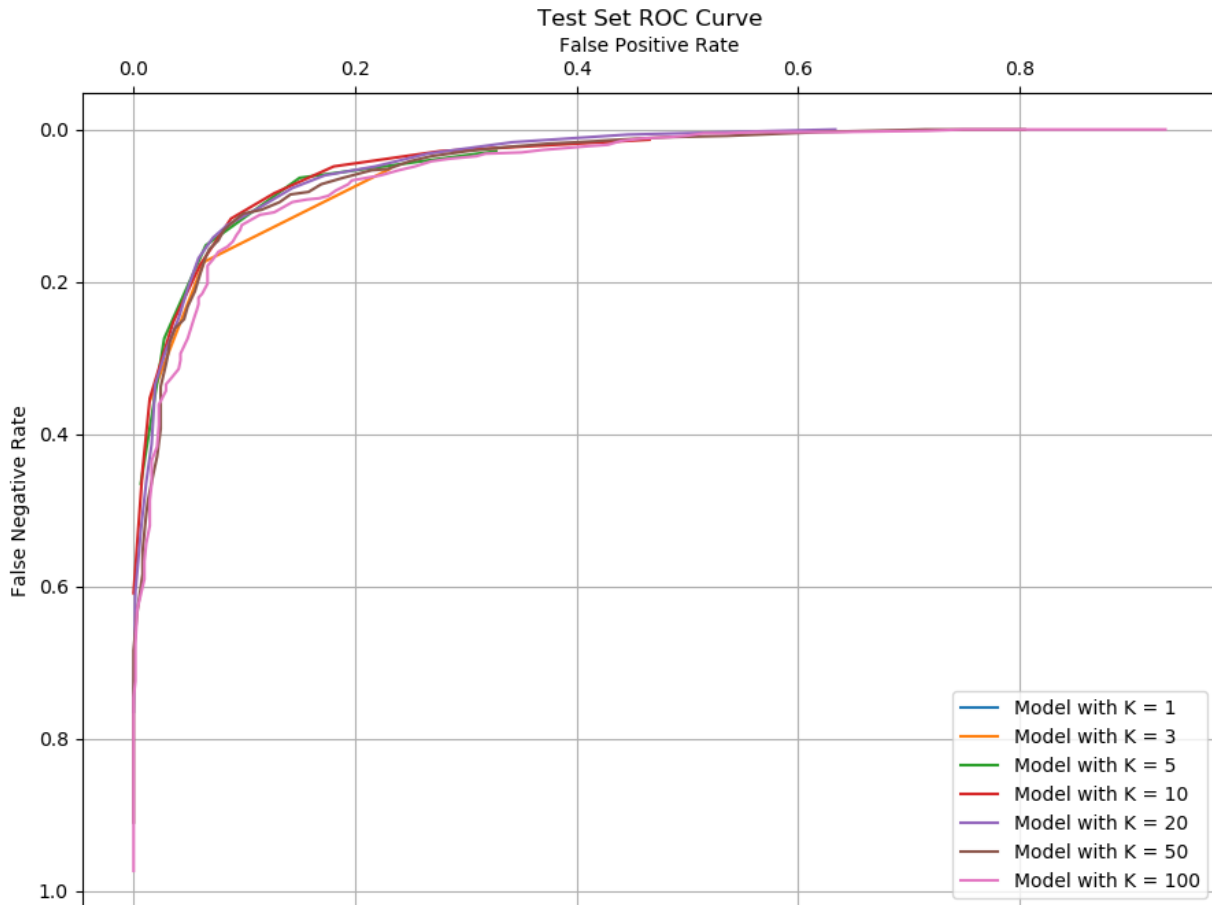


K Nearest Neighbors

1 ROC Curves for different K

All the raw program output can be found in the *Resut-KNearestNeighbors.txt* file. Here is the ROC Curves for different K value:



2 Best Parameter

From the ROC Curve we can find that:

- When need FPR (<0.075) and FNR (<0.3) both to be low, we should use $K = 5$
- When need FNR to be low (<0.125), we should use $K = 10$
- When need FNR to be low (<0.025), we should use $K = 20$
- When need FPR to be low (<0.025), we should use $K = 10$
- In general, we can choose $K = 10$ as the parameter.

For references, please see the zoom-in ROC Curves:

