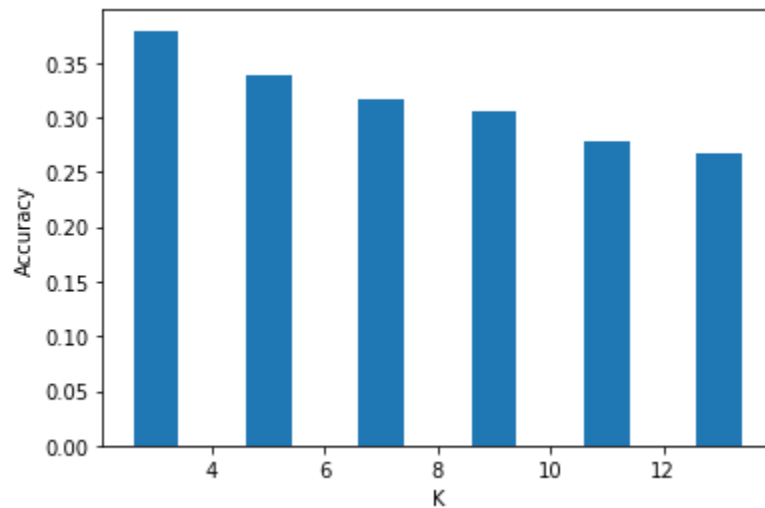


# HW5: KNN & SVM

Nick Hayeck

## KNN



features: BOW, best\_k: 3, test accuracy: 0.6116666666666667

3 0.3678571428571429

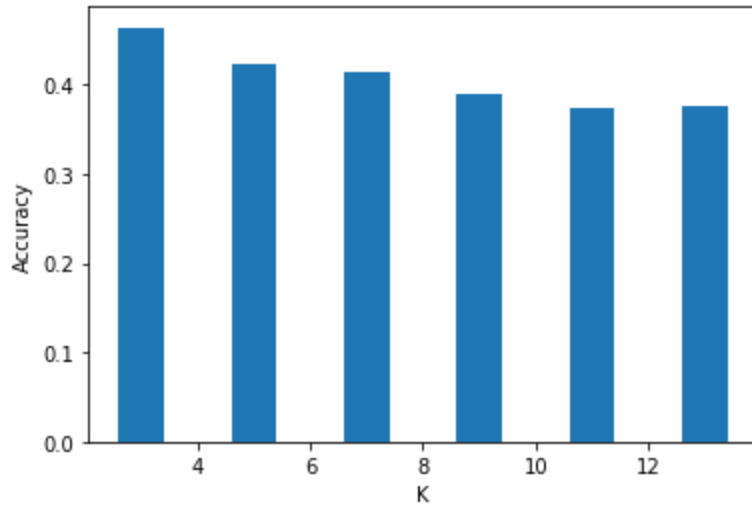
5 0.34571428571428575

7 0.33

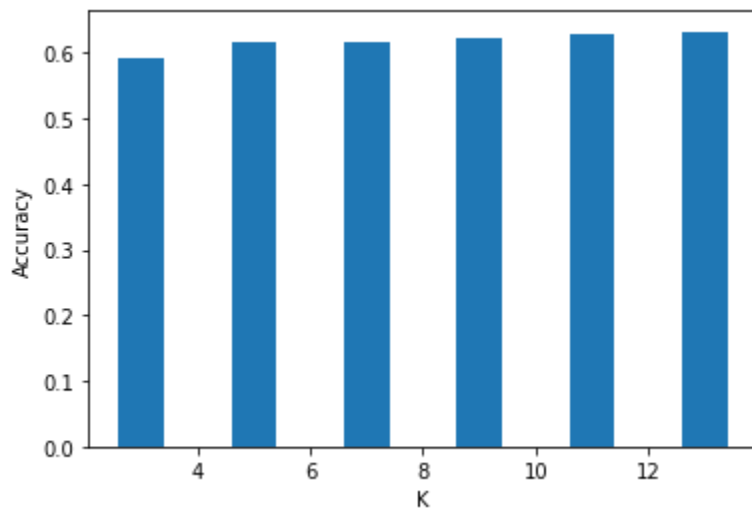
9 0.3135714285714286

11 0.2907142857142857

13 0.27



found best k for TFIDF model, it was 3. starting classification!  
 features: TFIDF, best\_k: 3, test accuracy: 0.6783333333333333  
 3 0.4892857142857143  
 5 0.4435714285714286  
 7 0.4128571428571428  
 9 0.39357142857142857  
 11 0.3757142857142857  
 13 0.37357142857142855



found best k for BERT model, it was 9. starting classification!  
 features: BERT, best\_k: 9, test accuracy: 0.7183333333333334  
 3 0.6528571428571428  
 5 0.6628571428571428  
 7 0.6707142857142857  
 9 0.6814285714285714

11 0.6707142857142857  
13 0.6707142857142857

## SVM

Three runs with different kernels (note that scores are rounded to two decimal places for brevity):

Score=0.84 with params C=1, kernel=rbf, degree=1

Score=0.85 with params C=1, kernel=poly, degree=1

Score=0.85 with params C=1, kernel=linear, degree=1