

Confusion matrix		Actual class	
		Food	No food
Predicted class	Food	1510	1187
	No food	565	6142

```

tag doesn't have food, but picture have food : 565
tag have food, but picture haven't food      : 1187
food picutre number:      1510
no_food picture number:   6142
food accuracy:            0.6258278145695364
no_food accuracy :       0.8067404754151742
total accuracy:  0.7710402509147936

```

# SVM & RBF Kernel

```
*****training set report *****
      precision    recall  f1-score   support

     0       0.89       0.98       0.93       1079
     1       0.97       0.85       0.91        921

 accuracy          0.92       2000
 macro avg         0.93       0.92       0.92       2000
weighted avg         0.93       0.92       0.92       2000

*****testing set report *****
      precision    recall  f1-score   support

     0       0.72       0.77       0.75        514
     1       0.74       0.69       0.71        486

 accuracy          0.73       1000
 macro avg         0.73       0.73       0.73       1000
weighted avg         0.73       0.73       0.73       1000
```

Select 311 tags, the number of occurrences of these tags accounted for 70% of the total.

Total tags: 3641

(recall \* support ) is the number of correct classification

# SVM

## &

## Polynomial kernel

```
*****training set report*****
      precision    recall  f1-score   support

     0       0.94      1.00      0.97      1079
     1       1.00      0.93      0.96       921

 accuracy          0.97      2000
 macro avg         0.97      0.96      0.97      2000
weighted avg         0.97      0.97      0.97      2000

*****testing set report*****
      precision    recall  f1-score   support

     0       0.73      0.75      0.74       514
     1       0.73      0.70      0.71       486

 accuracy          0.73      1000
 macro avg         0.73      0.73      0.73      1000
weighted avg         0.73      0.73      0.73      1000
```

Select 311 tags, the number of occurrences of these tags accounted for 70% of the total.

Total tags: 3641

(recall \* support ) is the number of correct classification

```

*****training set report *****
      precision    recall  f1-score   support

     0       0.75      0.82      0.78     1079
     1       0.76      0.69      0.72      921

 accuracy          0.76     2000
 macro avg       0.76      0.75      0.75     2000
weighted avg       0.76      0.76      0.75     2000

*****testing set report *****
      precision    recall  f1-score   support

     0       0.77      0.58      0.66      514
     1       0.65      0.82      0.72      486

 accuracy          0.70     1000
 macro avg       0.71      0.70      0.69     1000
weighted avg       0.71      0.70      0.69     1000

```



SVM &  
sigmoid  
Kernel

	precision	recall	f1-score	support
0	0.97	1.00	0.98	4813
1	0.99	0.86	0.92	1187
accuracy			0.97	6000
macro avg	0.98	0.93	0.95	6000
weighted avg	0.97	0.97	0.97	6000

\*\*\*\*\*testing set report\*\*\*\*\*

	precision	recall	f1-score	support
0	0.94	0.98	0.96	1329
1	0.91	0.76	0.83	323
accuracy			0.94	1652
macro avg	0.93	0.87	0.89	1652
weighted avg	0.94	0.94	0.94	1652

SVM &  
Polynomial  
kernel

**After shuffle  
data**