

```
C:\Python27\python.exe C:/Users/Argvz/Documents/PycharmProjects/ClassifTweets/  
grid_search.py
```

```
# Tuning hyper-parameters for precision
```

```
C:\Python27\lib\site-packages\sklearn\metrics\classification.py:958:
```

```
UndefinedMetricWarning: Precision is ill-defined and being set to 0.0 in labels with no  
predicted samples.
```

```
'precision', 'predicted', average, warn_for)
```

```
Best parameters set found on development set:
```

```
{'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.001, 'degree': 2}
```

```
Grid scores on development set:
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1, 'gamma': 0.001, 'degree': 2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1, 'gamma': 0.0001, 'degree':  
2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'rbf', 'C': 10, 'gamma': 0.001, 'degree':  
2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'rbf', 'C': 10, 'gamma': 0.0001, 'degree  
': 2}
```

```
0.565 (+/-0.074) for {'cache_size': 300, 'kernel': 'rbf', 'C': 100, 'gamma': 0.001, 'degree  
': 2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'rbf', 'C': 100, 'gamma': 0.0001, 'degree  
': 2}
```

```
0.701 (+/-0.070) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.001, 'degree  
': 2}
```

```
0.565 (+/-0.074) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.0001, '  
degree': 2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 1, 'gamma': 0.001, 'degree':  
2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 1, 'gamma': 0.0001, 'degree  
': 2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 10, 'gamma': 0.001, 'degree  
': 2}
```

```
0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 10, 'gamma': 0.0001, 'degree  
': 2}
```

0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 100, 'gamma': 0.001, 'degree': 2}

0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 100, 'gamma': 0.0001, 'degree': 2}

0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 1000, 'gamma': 0.001, 'degree': 2}

0.357 (+/-0.004) for {'cache_size': 300, 'kernel': 'poly', 'C': 1000, 'gamma': 0.0001, 'degree': 2}

Detailed classifications report:

The model is trained on the full development set.

The scores are computed on the hull evaluation set.

	precision	recall	f1-score	support
1.0	0.84	0.38	0.52	84
2.0	0.62	0.94	0.75	282
3.0	0.74	0.27	0.40	158

avg / total 0.69 0.65 0.61 524

Tuning hyper-parameters for recall

Best parameters set found on development set:

{'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.001, 'degree': 2}

Grid scores on development set:

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1, 'gamma': 0.0001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'rbf', 'C': 10, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'rbf', 'C': 10, 'gamma': 0.0001, 'degree': 2}

0.639 (+/-0.042) for {'cache_size': 300, 'kernel': 'rbf', 'C': 100, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'rbf', 'C': 100, 'gamma': 0.0001, 'degree': 2}

0.681 (+/-0.057) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.001, 'degree': 2}

0.639 (+/-0.042) for {'cache_size': 300, 'kernel': 'rbf', 'C': 1000, 'gamma': 0.0001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 1, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 1, 'gamma': 0.0001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 10, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 10, 'gamma': 0.0001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 100, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 100, 'gamma': 0.0001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 1000, 'gamma': 0.001, 'degree': 2}

0.598 (+/-0.003) for {'cache_size': 300, 'kernel': 'poly', 'C': 1000, 'gamma': 0.0001, 'degree': 2}

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Process finished with exit code 0