1. Adjust the column order:

```
confusion_matrix
```

	count	predicted_label	target_label
0	24	-1	-1
1	27	1	-1
2	11	-1	1
3	138	1	1

```
confusion_matrix_1 = confusion_matrix[["target_label", "predicted_label", "count"]]
```

```
confusion_matrix_1
```

	target_label	predicted_label	count
0	-1	-1	24
1	-1	1	27
2	1	-1	11
3	1	1	138

2. Precision/Recall score:

```
from sklearn.metrics import precision_score
from sklearn.metrics import recall_score
```

```
predictions = apply_threshold(probabilities, 0.5)
true_labels = test_data_1000_arr[:, -1]

print precision_score(true_labels, predictions)
```

```
0.8363636363636363
```

3. Confusion matrix:

```
from sklearn.metrics import confusion_matrix
```

```
threshold = 0.78

predictions = apply_threshold(probabilities, threshold)
confusion_matrix = confusion_matrix(true_labels, predictions)

confusion_matrix
```

```
array([[ 35,  16],
       [ 20, 129]], dtype=int64)
```

4. Convert a String field to lower cases:

```
test_data_1000_df["name"] = test_data_1000_df["name"].apply(lambda x: x.lower())
```

```
test_data_1000_df.head()
```

	name	review	rating	review_no_punc	word_count	sentiment	pre
521	baby trend diaper champ	I just wanted to say that I love my Diaper Cha...	5	I just wanted to say that I love my Diaper Cha...	{u'and': 1, u'feed': 1, u'love': 1, u'just': 1...	1	
737	safety 1st power strip cover	My little one looooves plug ins. This product...	4	My little one looooves plug ins This product ...	{u'all': 2, u'less': 1, u'moments': 1, u'despi...	1	
740	safety 1st grow with me portable booster seat	My first son got this booster when he was 2 ye...	5	My first son got this booster when he was 2 ye...	{u'all': 1, u'they': 1, u'just': 1, u'reviewer...	1	