

Final Results

December 10, 2017

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In [1]: import warnings
warnings.filterwarnings('ignore')

from sklearn.metrics import confusion_matrix
from decimal import Decimal
import numpy as np
# Read your csv files
with open('actual.csv', 'r') as readFile:
    true_values = [int(Decimal(ff)) for ff in readFile]
with open('prediction.csv', 'r') as readFile:
    predictions = [int(Decimal(ff)) for ff in readFile]
# Produce the confusion matrix
confusionMatrix = confusion_matrix(true_values, predictions)

print(confusionMatrix)
```

[98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[34	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0]
[84	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0]
[3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0]
[4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0]
[7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0]
[38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]
[40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0]

```
In [2]: from sklearn.metrics import classification_report
        target_names = ['class 1','class 2','class 3','class 4','class 5','class 6',
                        'class 7','class 8','class 9','class 10','class 11',
                        'class 12','class 13','class 14','class 15','class 16',
                        'class 17', 'class 18','class 19','class 20','class 21']
        print(classification_report(true_values, predictions, target_names=target_names))
```

	precision	recall	f1-score	support
class 1	0.19	1.00	0.33	98
class 2	1.00	0.03	0.05	36
class 3	0.00	0.00	0.00	60
class 4	0.00	0.00	0.00	9
class 5	0.00	0.00	0.00	54
class 6	1.00	0.50	0.67	2
class 7	1.00	0.01	0.02	85
class 8	0.00	0.00	0.00	3
class 9	0.00	0.00	0.00	1
class 10	0.00	0.00	0.00	14
class 11	1.00	0.20	0.33	5
class 12	0.00	0.00	0.00	4
class 13	1.00	0.33	0.50	3
class 14	0.00	0.00	0.00	7
class 15	0.00	0.00	0.00	2
class 16	0.00	0.00	0.00	4
class 17	0.00	0.00	0.00	38
class 18	0.00	0.00	0.00	37
class 19	0.00	0.00	0.00	10
class 20	0.00	0.00	0.00	40
avg / total	0.29	0.20	0.08	512

```
In [ ]:
```