

A Novel Method for Handwritten Digit Recognition System

Observing the metrics

Project Id: PNT2022TMID15811

```
In [99]: # Test the model
confusion_matrix(y_test,preds)
```

```
Out[99]: array([[ 978,    0,    0,    0,    0,    0,    0,    0,    2,    0],
 [    0, 1112,    2,    3,    0,    1,    1,    1,   15,    0],
 [    4,    0,  995,    2,    3,    0,    2,    3,   23,    0],
 [    0,    0,    2,  996,    0,    2,    0,    0,   10,    0],
 [    1,    0,    3,    0,  969,    0,    0,    0,    4,    5],
 [    2,    0,    0,   10,    0,  858,    2,    0,   15,    5],
 [    6,    1,    1,    0,    1,    1,  933,    0,   15,    0],
 [    0,    3,    8,    8,    5,    0,    0,  961,   29,   14],
 [    2,    0,    1,    0,    0,    0,    0,    1,  969,    1],
 [    7,    2,    0,    3,    7,    3,    0,    0,   24,  963]],
 dtype=int64)
```

```
In [23]: print(classification_report(y_test,preds))
```

	precision	recall	f1-score	support
0	0.99	0.99	0.99	980
1	1.00	0.99	0.99	1135
2	0.99	0.99	0.99	1032
3	0.99	0.99	0.99	1010
4	0.99	0.99	0.99	982
5	0.99	0.99	0.99	892
6	0.99	0.99	0.99	958
7	0.99	0.98	0.99	1028
8	1.00	0.98	0.99	974
9	0.99	0.97	0.98	1009
micro avg	0.99	0.99	0.99	10000
macro avg	0.99	0.99	0.99	10000
weighted avg	0.99	0.99	0.99	10000
samples avg	0.99	0.99	0.99	10000