In [1]:
```
import pandas as pd
import numpy as np
df = pd.read_csv("Digit_Recognization.csv")
df.head()
```

Out[1]:

	label	pixel0	pixel1	pixel2	pixel3	pixel4	pixel5	pixel6	pixel7	pixel8	...	pixel774	pixel775	pixel776	pixel777	pixel778	pixel779	pixel780
0	1	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
2	1	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	0
3	4	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	0	...	0	0	0	0	0	0	0

5 rows × 785 columns

In [2]:
```
df.shape
```

Out[2]:
```
(42000, 785)
```

In [3]:
```
x = df.drop("label",axis=1)
y = df["label"]
```

In [4]:
```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x,y,test_size=0.2,random_state=1)
```

In [5]:
```
from sklearn.svm import SVC
model = SVC()
```

In [6]:
```
rissh = model.fit(x_train,y_train)
```

In [9]:
```
x_test.head()
```

Out[9]:

	pixel0	pixel1	pixel2	pixel3	pixel4	pixel5	pixel6	pixel7	pixel8	pixel9	...	pixel774	pixel775	pixel776	pixel777	pixel778	pixel779	pix

	pixel0	pixel1	pixel2	pixel3	pixel4	pixel5	pixel6	pixel7	pixel8	pixel9	...	pixel774	pixel775	pixel776	pixel777	pixel778	pixel779	pix
29633	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	
345	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	
36369	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	
16624	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	
14389	0	0	0	0	0	0	0	0	0	0	...	0	0	0	0	0	0	

5 rows × 784 columns

In [8]:
```
y_test
```

Out[8]:
```
29633    1
345      5
36369    2
16624    8
14389    4
        ..
17605    1
1390     6
6085     8
32412    8
22381    8
Name: label, Length: 8400, dtype: int64
```

In [12]:
```
rissh.score(x_test,y_test)*100
```

Out[12]:
```
97.80952380952381
```

In [ ]:
```

```