

## Experiment-13:

### Naive Bayesian Classifier

```
In [2]: from sklearn.naive_bayes import GaussianNB
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score, classification_report
from sklearn.datasets import load_iris
```

```
In [5]: X, y = load_iris(return_X_y=True)
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=101)
```

```
In [6]: model = GaussianNB()
model.fit(X_train, y_train)
```

```
Out[6]:
```

▼ GaussianNB
GaussianNB()

```
In [7]: preds = model.predict(X_test)
print('Accuracy Score :',accuracy_score(preds,y_test))
print('Classification Report :\n',classification_report(preds,y_test))
```

Accuracy Score : 0.9666666666666667

Classification Report :

	precision	recall	f1-score	support
0	1.00	1.00	1.00	10
1	1.00	0.92	0.96	13
2	0.88	1.00	0.93	7
accuracy			0.97	30
macro avg	0.96	0.97	0.96	30
weighted avg	0.97	0.97	0.97	30

```
In [ ]:
```