

NAIVE BAYESIAN ¶

In [19]:

```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import sklearn
```

In [33]:

```
df=pd.read_csv('C:/Users/USER/Desktop/petrol_consumption.csv')
df.head()
```

Out[33]:

	Petrol_tax	Average_income	Paved_Highways	Population_Driver_licence(%)	Petrol_Consumpt
0	9.0	3571	1976	0.525	!
1	9.0	4092	1250	0.572	!
2	9.0	3865	1586	0.580	!
3	7.5	4870	2351	0.529	,
4	8.0	4399	431	0.544	,

In [10]:

```
print(df.shape)
```

(48, 6)

In [22]:

```
X = df.iloc[:, [1,2,3,4]].values
y = df.iloc[:, -1].values
```

In [23]:

```
from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
X[:,0] = le.fit_transform(X[:,0])
```

In [24]:

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.20, random_state =
```

In [25]:

```
from sklearn.preprocessing import StandardScaler  
sc = StandardScaler()  
X_train = sc.fit_transform(X_train)  
X_test = sc.transform(X_test)
```

In [26]:

```
from sklearn.naive_bayes import GaussianNB  
classifier = GaussianNB()  
classifier.fit(X_train, y_train)
```

Out[26]:

GaussianNB()

In [27]:

```
y_pred = classifier.predict(X_test)
```

In [28]:

```
y_pred
```

Out[28]:

```
array([1, 1, 1, 1, 1, 0, 1, 1, 1, 1], dtype=int64)
```

In [29]:

```
y_test
```

Out[29]:

```
array([0, 1, 0, 1, 1, 1, 1, 1, 0, 1], dtype=int64)
```

In [30]:

```
from sklearn.metrics import confusion_matrix, accuracy_score  
cm = confusion_matrix(y_test, y_pred)  
ac = accuracy_score(y_test, y_pred)
```

In [32]:

```
print("Accuracy=", ac*100)
```

Accuracy= 60.0

In []:

