

Support vector machine(SVM)

```
import pandas as pd
```

```
import matplotlib.pyplot as plt
```

```
import numpy as np
```

```
dataset = pd.read_csv(r'D:\Samsom - All Data\Naresh IT Institute\New folder\logit  
classification.csv')
```

```
x = dataset.iloc[:, [2, 3]].values
```

```
y = dataset.iloc[:, -1].values
```

```
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=0)
```

```
from sklearn.preprocessing import StandardScaler
```

```
sc = StandardScaler()
```

```
x_train = sc.fit_transform(x_train)
```

```
x_test = sc.transform(x_test)
```

```
from sklearn.svm import SVC
```

```
classifier = SVC(C=100.0, kernel='poly', degree=4, gamma = 'auto')
```

```
classifier.fit(x_train, y_train)
```

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

```
from sklearn.metrics import confusion_matrix
```

```
cm = confusion_matrix(y_test, y_pred)
print(cm)
```

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

```
from sklearn.metrics import classification_report
cr = classification_report(y_test, y_pred)
cr
```

```
bias = classifier.score(x_train, y_train)
print(bias)
```

```
variance = classifier.score(x_test, y_test)
print(variance)
```