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

```python
df = pd.read_csv("Social_Network_Ads.csv")
```

```python
df.head()
```

	User ID	Gender	Age	EstimatedSalary	Purchased
0	15624510	Male	19	19000	0
1	15810944	Male	35	20000	0
2	15668575	Female	26	43000	0
3	15603246	Female	27	57000	0
4	15804002	Male	19	76000	0

```python
df.shape
```

```
(400, 5)
```

```python
x = df.iloc[:, [2, 3]]
x.head()
```

	Age	EstimatedSalary
0	19	19000
1	35	20000
2	26	43000
3	27	57000
4	19	76000

```python
y = df.iloc[:, 4]
y.head()
```

```
0    0
1    0
2    0
3    0
4    0
Name: Purchased, dtype: int64
```

```python
from sklearn.model_selection import train_test_split
```

```python
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.25, random_s
```

```python
print("Training data examples: ", x_train.shape)
print("Testing data examples: ", x_test.shape)
```

```
Training data examples:  (300, 2)
Testing data examples:  (100, 2)
```

```python
from sklearn.preprocessing import StandardScaler

sc = StandardScaler()

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

```python
from sklearn.svm import SVC

classifier = SVC(kernel='linear', random_state=0)
classifier.fit(x_train, y_train)
y_pred = classifier.predict(x_test)
```

```python
y_pred
```

```
array([0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1,
       0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0,
       1, 0, 0, 1, 0, 1, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 1,
       0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 1, 0, 1, 1, 1, 1, 0, 0, 1, 1, 0, 1,
       0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 1])
```

```python
from sklearn import metrics

print("Accuracy (Linear kernel):", metrics.accuracy_score(y_test, y_pred))
```

```
Accuracy (Linear kernel): 0.9
```

```python
from sklearn.svm import SVC

classifier = SVC(kernel='rbf', random_state=0)
classifier.fit(x_train, y_train)
y_pred = classifier.predict(x_test)
```

```python
y_pred
```

```
array([0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 1,
       0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0,
       1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 0, 0, 1, 0, 1, 0, 1,
       0, 0, 0, 0, 1, 0, 0, 1, 0, 0, 0, 0, 1, 1, 1, 1, 0, 0, 1, 0, 0, 1,
       1, 0, 0, 1, 0, 0, 0, 0, 0, 1, 1, 1])
```

```python
from sklearn import metrics

print("Accuracy (RBF kernel):", metrics.accuracy_score(y_test, y_pred))
```

```
Accuracy (RBF kernel): 0.93
```

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