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

```python
dataset = pd.read_csv('../Social_Network_Ads.csv')
from sklearn.preprocessing import LabelEncoder
le=LabelEncoder()
dataset['Gender']=le.fit_transform(dataset['Gender'])
```

```python
print(dataset.head())
```

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

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

```python
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y,
                                    test_size = 0.25, random_state = 0)
```

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

```python
from sklearn.naive_bayes import GaussianNB
model = GaussianNB()
model.fit(X_train, y_train);
```

```python
from sklearn.metrics import (
    accuracy_score,
    confusion_matrix,
    ConfusionMatrixDisplay,
    f1_score,
    classification_report,
)

y_pred = model.predict(X_test)

accuracy = accuracy_score(y_pred, y_test)
f1 = f1_score(y_pred, y_test, average="weighted")

print("Accuracy:", accuracy)
print("F1 Score:", f1)
```

```
Accuracy: 0.91
F1 Score: 0.9122178146411828
```

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

```
[[66  2]
 [ 7 25]]
```

In [ ]:
```python
import seaborn as sns
sns.heatmap(cm, annot=True, fmt="d")
plt.show()
```