import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

from sklearn.model\_selection import train\_test\_split

from sklearn.svm import SVC

from sklearn.metrics import accuracy\_score, precision\_score, recall\_score, f1\_score, confusion\_matrix, classification\_report

df3 = pd.read\_csv('/content/customer.csv')

df3

X = df3.drop(columns=['Purchased']).values

y = df3['Purchased'].values

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

model = SVC(kernel='rbf', C=1.0, gamma='scale')

model.fit(X\_train, y\_train)

y\_pred = model.predict(X\_test)

accuracy = accuracy\_score(y\_test, y\_pred)

precision = precision\_score(y\_test, y\_pred)

recall = recall\_score(y\_test, y\_pred)

f1 = f1\_score(y\_test, y\_pred)

conf\_matrix = confusion\_matrix(y\_test, y\_pred)

print("Accuracy:", accuracy)

print("Precision:", precision)

print("Recall:", recall)

print("F1 Score:", f1)

print("Confusion Matrix:\n", conf\_matrix)

print("Classification Report:\n", classification\_report(y\_test, y\_pred))

plt.figure(figsize=(6, 5))

sns.heatmap(conf\_matrix, annot=True, fmt='d', cmap='Blues', xticklabels=['Class 0', 'Class 1'], yticklabels=['Class 0', 'Class 1'])

plt.title('Confusion Matrix')

plt.xlabel('Predicted Label')

plt.ylabel('True Label')

plt.show()