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**BATCH-5(AI&ML)**

**Naive Bayes Experiment**

**Code:**

# Assigning features and label variables

weather=['Sunny','Sunny','Overcast','Rainy','Rainy','Rainy','Overcast','Sunny','Sunny','Rainy','Sunny','Overcast','Overcast','Rainy']

temp=['Hot','Hot','Hot','Mild','Cool','Cool','Cool','Mild','Cool','Mild','Mild','Mild','Hot','Mild']

play=['No','No','Yes','Yes','Yes','No','Yes','No','Yes','Yes','Yes','Yes','Yes','No']

from sklearn import preprocessing

le=preprocessing.LabelEncoder()

weather\_encoded=le.fit\_transform(weather)

print(weather\_encoded)

temp\_encoded=le.fit\_transform(temp)

label=le.fit\_transform(play)

print("temp:",temp\_encoded)

print("play:",label)

features=list(zip(weather\_encoded,temp\_encoded))

print(features)

from sklearn.naive\_bayes import GaussianNB

model=GaussianNB()

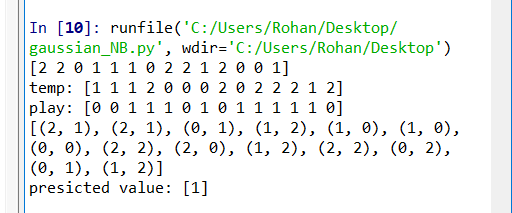
model.fit(features,label)

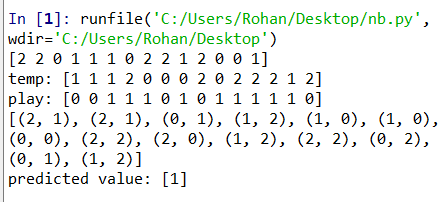
predicted=model.predict([[0,2]])

#0:overcast,2:mild

print("presicted value:",predicted)

**Output:**

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