

Lab2: Naïve Bayes Classifier using Python Scikit-learn - Defining our own dataset

1	<pre># Defining Dataset # 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'] # Label or target variable play=['No','No','Yes','Yes','Yes','No','Yes','No','Yes','Yes','Yes', 'Yes','Yes','No']</pre>
2	<pre># Encoding Features # Import LabelEncoder from sklearn import preprocessing # Creating labelEncoder le = preprocessing.LabelEncoder() # Converting string labels into numbers. weather_encoded=le.fit_transform(weather) print(weather_encoded)</pre>
3	<pre># Converting string labels into numbers temp_encoded=le.fit_transform(temp) label=le.fit_transform(play) print("Temp:",temp_encoded) print("Play:",label)</pre>
4	<pre># Combining weather and temp into single list of tuples # item-item berupa tuple berpasangan # [(2, 1), (2, 1), (0, 1), (1, 2), (1, 0), (1, 0), (0, 0), (2, 2), (2, 0), (1, 2), (2, 2), (0, 2), (0, 1), (1, 2)] features=zip(weather_encoded,temp_encoded)</pre>
5	<pre># Generating Model #Import Gaussian Naive Bayes model from sklearn.naive_bayes import GaussianNB #Create a Gaussian Classifier model = GaussianNB()</pre>
6	<pre># Train the model using the training sets model.fit(list(features),label)</pre>
7	<pre>#Predict Output predicted= model.predict([[0,2]]) # 0:Overcast, 2:Mild print("Predicted Value:", predicted)</pre>