Lab1: Simple Nearest Neigbor using Scikit-learn

1
```
# Defining dataset
# Assigning features and label variables
# First Feature
weather=['Sunny','Sunny','Overcast','Rainy','Rainy','Rainy',
'Overcast','Sunny','Sunny','Rainy','Sunny','Overcast','Overcast',
'Rainy']
# Second Feature
temp=['Hot','Hot','Hot','Mild','Cool','Cool','Cool','Mild','Cool',
'Mild','Mild','Mild','Hot','Mild']

# Label or target varible
play=['No','No','Yes','Yes','Yes','No','Yes','No','Yes','Yes','Yes'
,'Yes','Yes','No']
```

2
```
# Encoding data columns
# 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)
```

3
```
# converting string labels into numbers
# encode temperature and label into numeric columns.
temp_encoded=le.fit_transform(temp)
label=le.fit_transform(play)
```

4
```
# combining weather and temp into single listof tuples
features=list(zip(weather_encoded,temp_encoded))
```

5
```
# Generating Model
from sklearn.neighbors import KNeighborsClassifier

model = KNeighborsClassifier(n_neighbors=3)

# Train the model using the training sets
model.fit(features,label)

#Predict Output
predicted= model.predict([[0,2]]) # 0:Overcast, 2:Mild
print(predicted)
```