

```
In [ ]: import pandas as pd
df = pd.read_csv("mldata.csv")
df.head()
```

```
Out[ ]:   age  height  weight  gender  likeness
0    27   170.688    76.0   Male    Biryani
1    41   165.000    70.0   Male    Biryani
2    29   171.000    80.0   Male    Biryani
3    27   173.000   102.0   Male    Biryani
4    29   164.000    67.0   Male    Biryani
```

```
In [ ]: df['gender'] = df["gender"].replace("Male", 1)
df['gender'] = df["gender"].replace("Female", 0)
df.head()
```

```
Out[ ]:   age  height  weight  gender  likeness
0    27   170.688    76.0     1    Biryani
1    41   165.000    70.0     1    Biryani
2    29   171.000    80.0     1    Biryani
3    27   173.000   102.0     1    Biryani
4    29   164.000    67.0     1    Biryani
```

```
In [ ]: #selection of input and output variables
X = df[['weight', 'gender']]
y = df['likeness']
```

```
In [ ]: from sklearn.tree import DecisionTreeClassifier

model = DecisionTreeClassifier().fit(X,y)

model.predict([[80,1]])
```

```
Out[ ]: array(['Biryani'], dtype=object)
```

```
In [ ]: from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.2, random_state = 1)

model = DecisionTreeClassifier()
model.fit(X_train, y_train)
predicted_values = model.predict(X_test)
predicted_values
```

```
Out[ ]: array(['Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani',
'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani',
'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Pakora',
'Biryani', 'Pakora', 'Biryani', 'Biryani', 'Biryani', 'Samosa',
'Biryani', 'Biryani', 'Biryani', 'Samosa', 'Biryani', 'Biryani',
'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani',
'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Samosa',
'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani', 'Biryani',
'Biryani'], dtype=object)
```

```
In [ ]: score = accuracy_score(y_test, predicted_values)
score
```

```
Out[ ]: 0.5102040816326531
```

```
In [ ]: import pandas as pd
from sklearn.tree import DecisionTreeClassifier
import joblib

model = DecisionTreeClassifier().fit(X,y)

joblib.dump(model, "foodie.joblib")
```

```
Out[ ]: ['foodie.joblib']
```

```
In [ ]: # Load the model from the file
        model_from_joblib = joblib.load('foodie.joblib')
```

```
In [ ]: print(model_from_joblib.predict(X_test))
```

```
['Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani'
'Biryani' 'Biryani' 'Biryani' 'Samosa' 'Samosa' 'Biryani' 'Biryani'
'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani'
'Biryani' 'Biryani' 'Biryani' 'Samosa' 'Biryani' 'Biryani' 'Biryani'
'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani' 'Biryani'
'Samosa' 'Samosa' 'Biryani' 'Biryani' 'Samosa' 'Biryani' 'Biryani'
'Biryani' 'Biryani' 'Samosa' 'Biryani' 'Biryani' 'Biryani' 'Biryani']
```

```
In [ ]: #graph
        from sklearn import tree

        model = DecisionTreeClassifier().fit(X,y)
        #Look into what happen
        tree.export_graphviz(model, out_file = "foodie.dot",
                             feature_names=["age","gender"],
                             class_names = sorted(y.unique()),
                             label = "all",
                             rounded = True, filled = True
                             )
```