

k-nn

June 27, 2024

```
[2]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import sklearn.model_selection as train_test_split
import sklearn.neighbors as KNeighborsClassifier
import sklearn.metrics as accuracy_score
```

```
[3]: data={
    'BP': [120,130,140,150,160,170,180,190,200,210],
    'Cholesteoral': [200,220,240,260,280,300,320,340,360,380],
    'HeartRisk' : [0,0,0,0,1,1,1,1,1,1]
}
df= pd.DataFrame(data)
```

```
[5]: x=df[['BP','Cholesteoral']]
y=df['HeartRisk']
```

```
[7]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
from sklearn.model_selection import train_test_split # Import the class_
↳directly
from sklearn.neighbors import KNeighborsClassifier # Import the class directly
from sklearn.metrics import accuracy_score

# ... (rest of your code)

k = 3
knn = KNeighborsClassifier(n_neighbors=k) # Now you're using the class_
↳correctly
knn.fit(x, y)
```

```
[7]: KNeighborsClassifier(n_neighbors=3)
```

```
[9]: new_data = np.array([[100,200]])
prediction = knn.predict(new_data)
```

```
if prediction ==0:
    print("Low risk")
elif prediction ==1:
    print("High risk")
```

Low risk

/usr/local/lib/python3.10/dist-packages/sklearn/base.py:439: UserWarning: X does not have valid feature names, but KNeighborsClassifier was fitted with feature names

```
warnings.warn(
```