

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
```

```
cols = ['sepal length', 'sepal width', 'petal length', 'petal width', 'class']
df = pd.read_csv('datasets/iris.data', names=cols)
df.head()
```

```
df.info()
```

```
from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
df['class'] = le.fit_transform(df['class'])
df
```

```
X = df.iloc[:, :-1].values
y = df.iloc[:, -1].values
```

```
pd.plotting.scatter_matrix(df.iloc[:, :-1], c=y, figsize=(15,15), marker='o', s=60, alpha=0.8, cmap=plt.cm.Set1, edgecolor='k')
```

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X,y,test_size=0.25,random_state=0)
```

```
from sklearn.neighbors import KNeighborsClassifier
model = KNeighborsClassifier(n_neighbors=1) # change to 3
model.fit(X_train,y_train)
```

```
y_test_pred = model.predict(X_test)
print("Predicted values:", y_test_pred)
print("Actual values:", y_test)
```

```
accuracy = model.score(X_test,y_test)
print("Model accuracy:{:.3f}".format(accuracy))
```