


```
import pandas as pd
df = pd.read_csv('/content/Iris.csv')
```

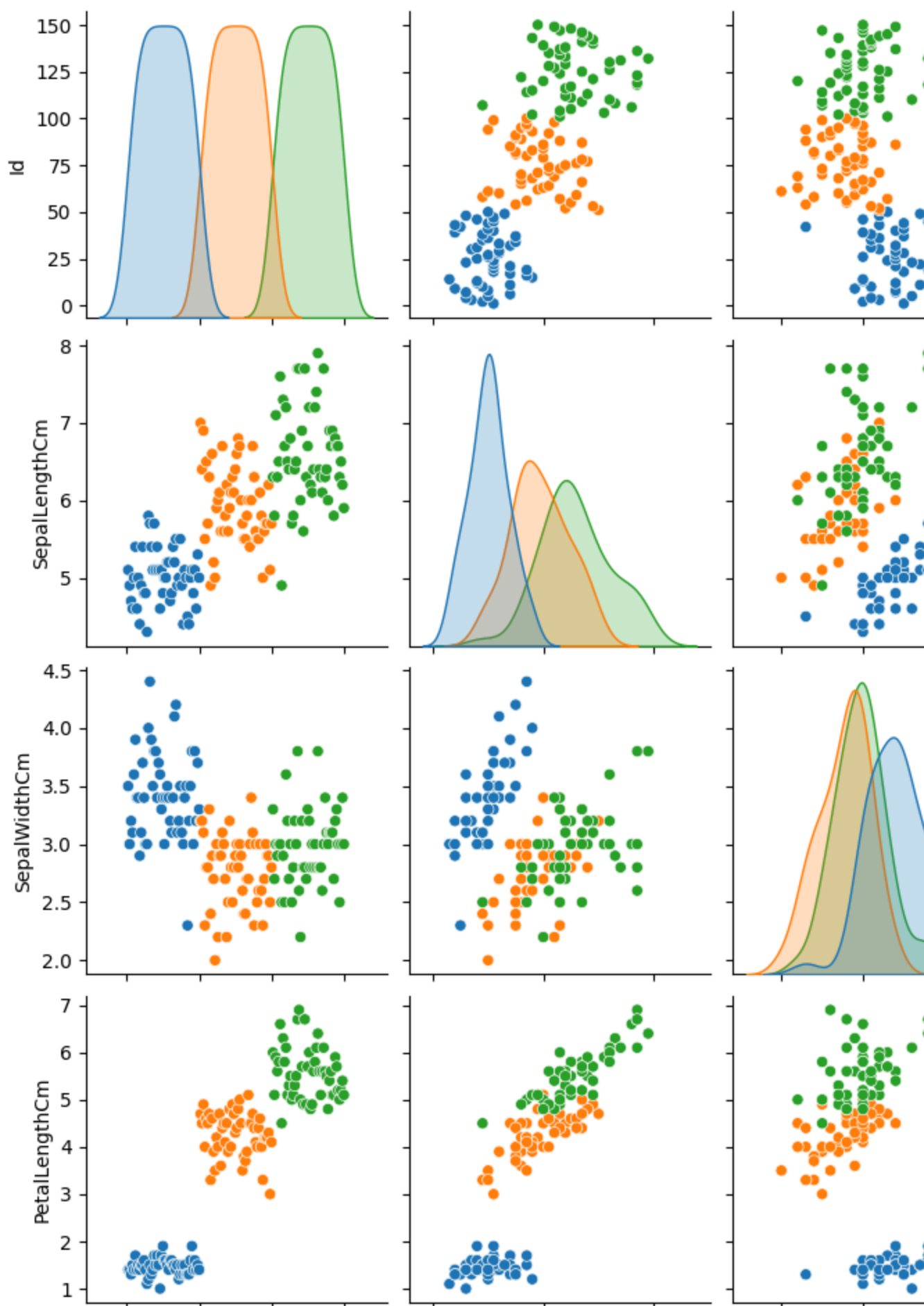
```
df.head()
```

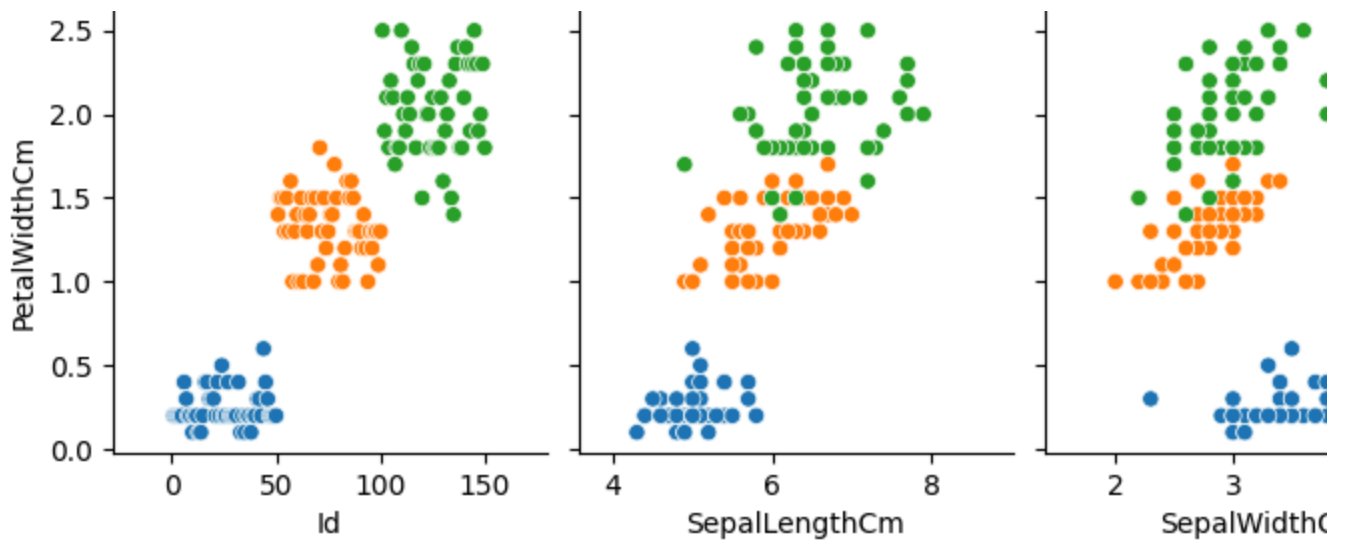


	<b>Id</b>	<b>SepalLengthCm</b>	<b>SepalWidthCm</b>	<b>PetalLengthCm</b>	<b>PetalWidthCm</b>	<b>Species</b>
<b>0</b>	1	5.1	3.5	1.4	0.2	Iris-setosa
<b>1</b>	2	4.9	3.0	1.4	0.2	Iris-setosa
<b>2</b>	3	4.7	3.2	1.3	0.2	Iris-setosa
<b>3</b>	4	4.6	3.1	1.5	0.2	Iris-setosa
<b>4</b>	5	5.0	3.6	1.4	0.2	Iris-setosa

```
import seaborn as sns
sns.pairplot(df, hue = 'Species')
```

 <seaborn.axisgrid.PairGrid at 0x7edc667745b0>





```
from sklearn.preprocessing import LabelEncoder
label_encoder = LabelEncoder()
labels = label_encoder.fit_transform(df['Species'])
df['Species'] = labels
```

```
X = df.iloc[:, 0:5]
Y = df.loc[:, 'Species']
print(Y)
```

```
⇒ 0      0
   1      0
   2      0
   3      0
   4      0
   ..
  145     2
  146     2
  147     2
  148     2
  149     2
   Name: Species, Length: 150, dtype: int64
```

```
from sklearn.model_selection import train_test_split
X_train, X_test, Y_train, Y_test = train_test_split(X, Y, test_size = 0.2, random_state = 0)
```

```
from sklearn.neighbors import KNeighborsClassifier
knn = KNeighborsClassifier(n_neighbors = 5)
knn.fit(X_train, Y_train)
```

```
⇒ ▾ KNeighborsClassifier
   KNeighborsClassifier()
```

```

prediction = knn.predict(X_test)
from sklearn.metrics import accuracy_score
print(accuracy_score(Y_test, prediction))

for item in prediction:
    if item == 0:
        print({item}, 'Iris Setosa')
    elif item == 1:
        print({item} , 'Iris Versicolor')
    else:
        print({item}, 'Iris Virginica')

```

```

➡ {2} Iris Virginica
   {1} Iris Versicolor
   {0} Iris Setosa
   {2} Iris Virginica
   {0} Iris Setosa
   {2} Iris Virginica
   {0} Iris Setosa
   {1} Iris Versicolor
   {1} Iris Versicolor
   {1} Iris Versicolor
   {2} Iris Virginica
   {1} Iris Versicolor
   {1} Iris Versicolor
   {1} Iris Versicolor
   {1} Iris Versicolor
   {0} Iris Setosa
   {1} Iris Versicolor
   {1} Iris Versicolor
   {0} Iris Setosa
   {0} Iris Setosa
   {2} Iris Virginica
   {1} Iris Versicolor
   {0} Iris Setosa
   {0} Iris Setosa
   {2} Iris Virginica
   {0} Iris Setosa
   {0} Iris Setosa

```