

```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
data=pd.read_csv('Iris.csv')
data
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	\
0	1	5.1	3.5	1.4	0.2	
1	2	4.9	3.0	1.4	0.2	
2	3	4.7	3.2	1.3	0.2	
3	4	4.6	3.1	1.5	0.2	
4	5	5.0	3.6	1.4	0.2	
..	
145	146	6.7	3.0	5.2	2.3	
146	147	6.3	2.5	5.0	1.9	
147	148	6.5	3.0	5.2	2.0	
148	149	6.2	3.4	5.4	2.3	
149	150	5.9	3.0	5.1	1.8	

	Species
0	Iris-setosa
1	Iris-setosa
2	Iris-setosa
3	Iris-setosa
4	Iris-setosa
..	...
145	Iris-virginica
146	Iris-virginica
147	Iris-virginica
148	Iris-virginica
149	Iris-virginica

[150 rows x 6 columns]

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Id              150 non-null   int64
1   SepalLengthCm   150 non-null   float64
2   SepalWidthCm    150 non-null   float64
3   PetalLengthCm   150 non-null   float64
4   PetalWidthCm    150 non-null   float64
5   Species         150 non-null   object
```

```

dtypes: float64(4), int64(1), object(1)
memory usage: 7.2+ KB

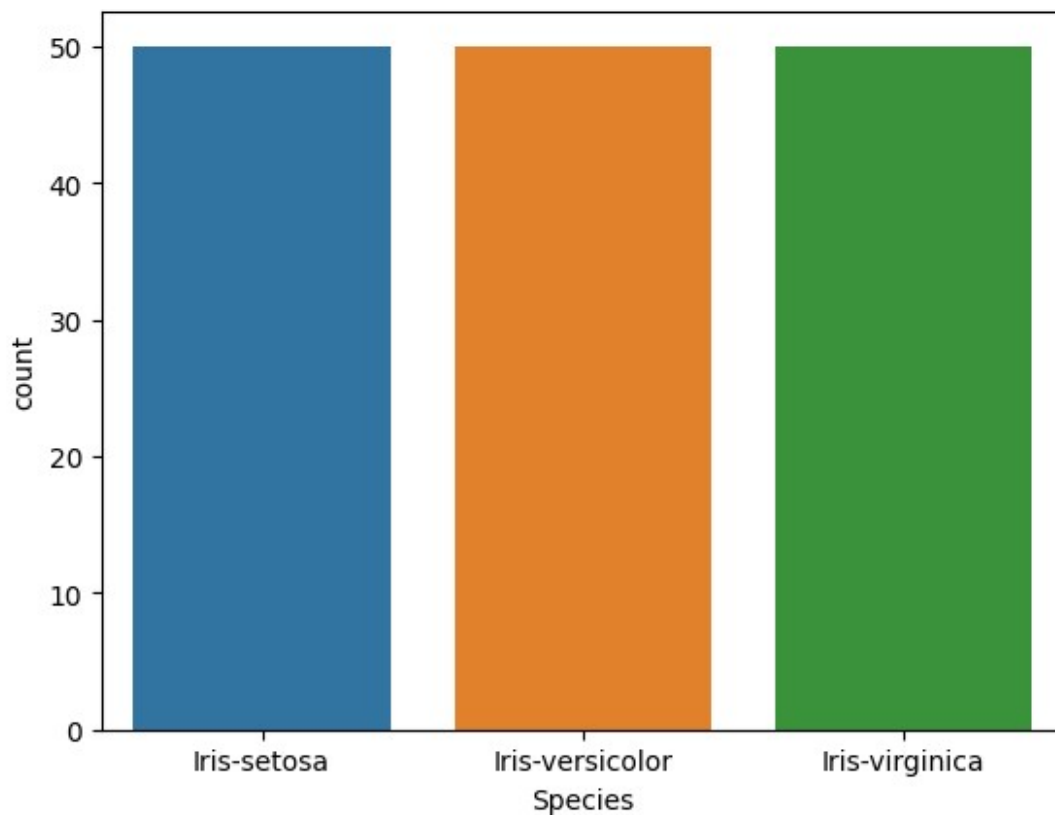
data.value_counts('Species')

Species
Iris-setosa      50
Iris-versicolor  50
Iris-virginica   50
dtype: int64

sns.countplot(x='Species',data=data,)
plt.show()

dummies=pd.get_dummies(data.Species)
FinalDataset=pd.concat([pd.get_dummies(data.Species),data.iloc[:,
[0,1,2,3]]],axis=1)
FinalDataset.head()

```

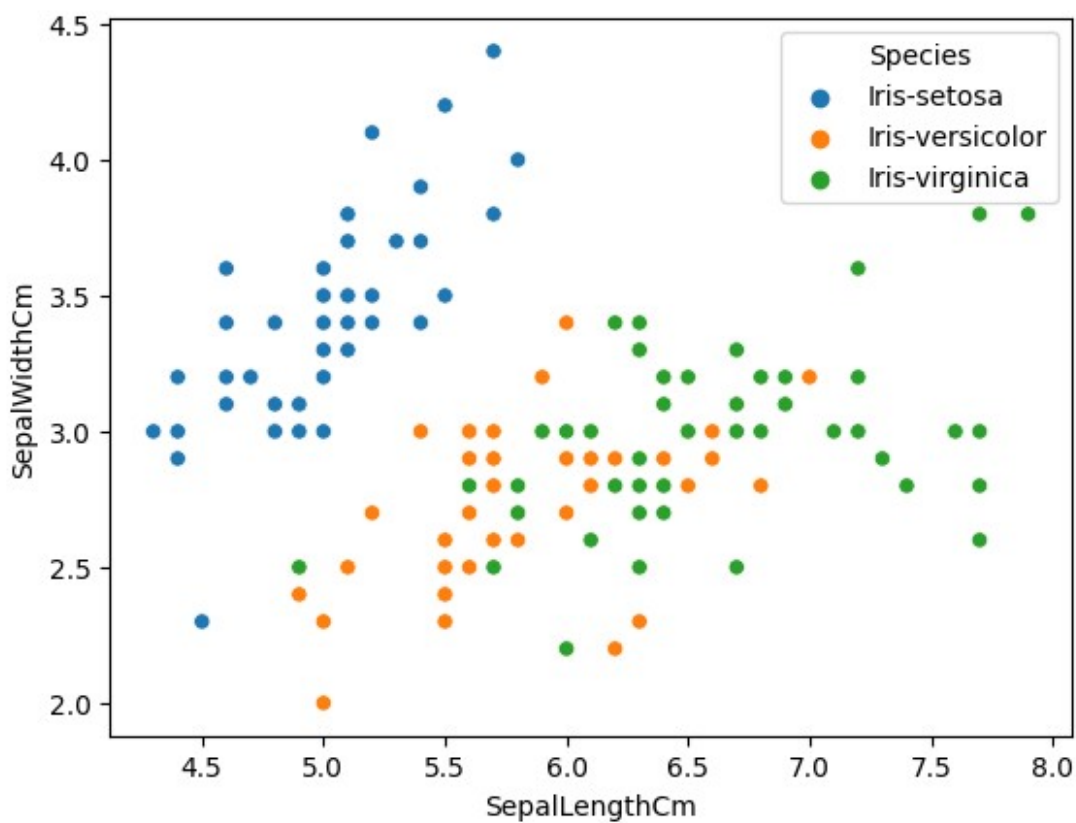


	Iris-setosa	Iris-versicolor	Iris-virginica	Id	SepalLengthCm	\
0	1	0	0	1	5.1	
1	1	0	0	2	4.9	
2	1	0	0	3	4.7	
3	1	0	0	4	4.6	

4	1	0	0	5	5.0
	SepalWidthCm	PetalLengthCm			
0	3.5	1.4			
1	3.0	1.4			
2	3.2	1.3			
3	3.1	1.5			
4	3.6	1.4			

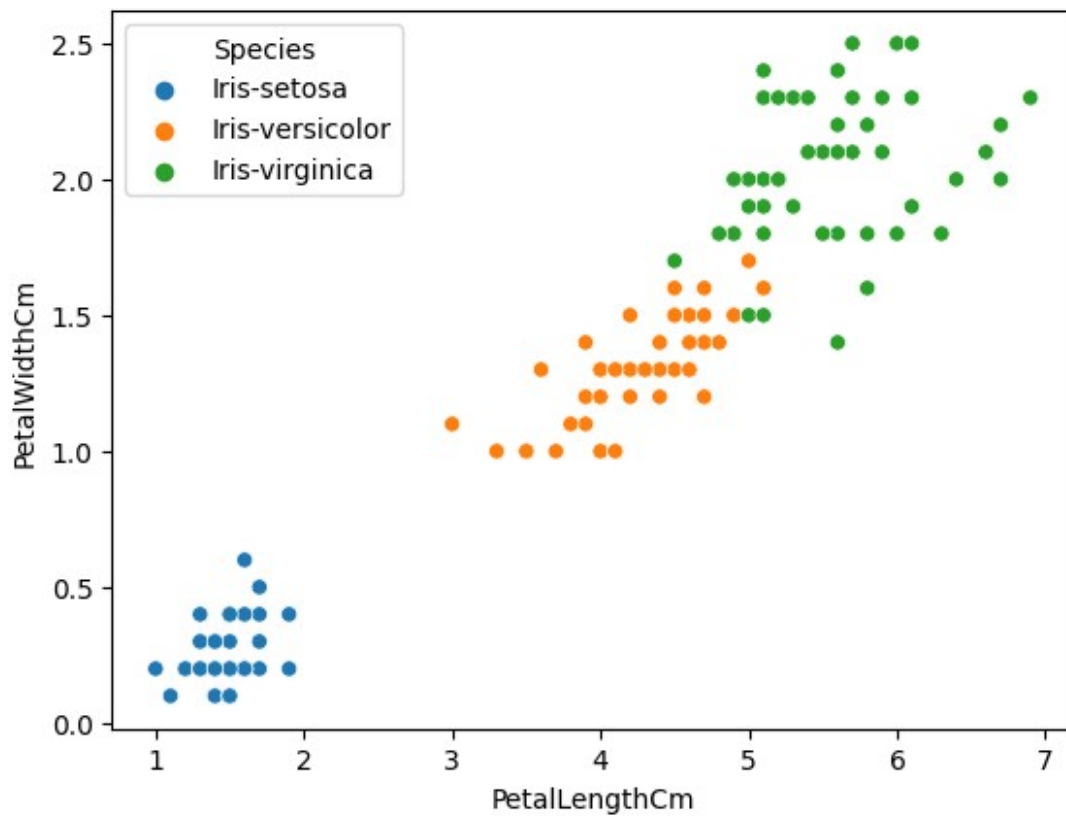
```
sns.scatterplot(x='SepalLengthCm',y='SepalWidthCm',hue='Species',data=
data)
```

```
<AxesSubplot:xlabel='SepalLengthCm', ylabel='SepalWidthCm'>
```

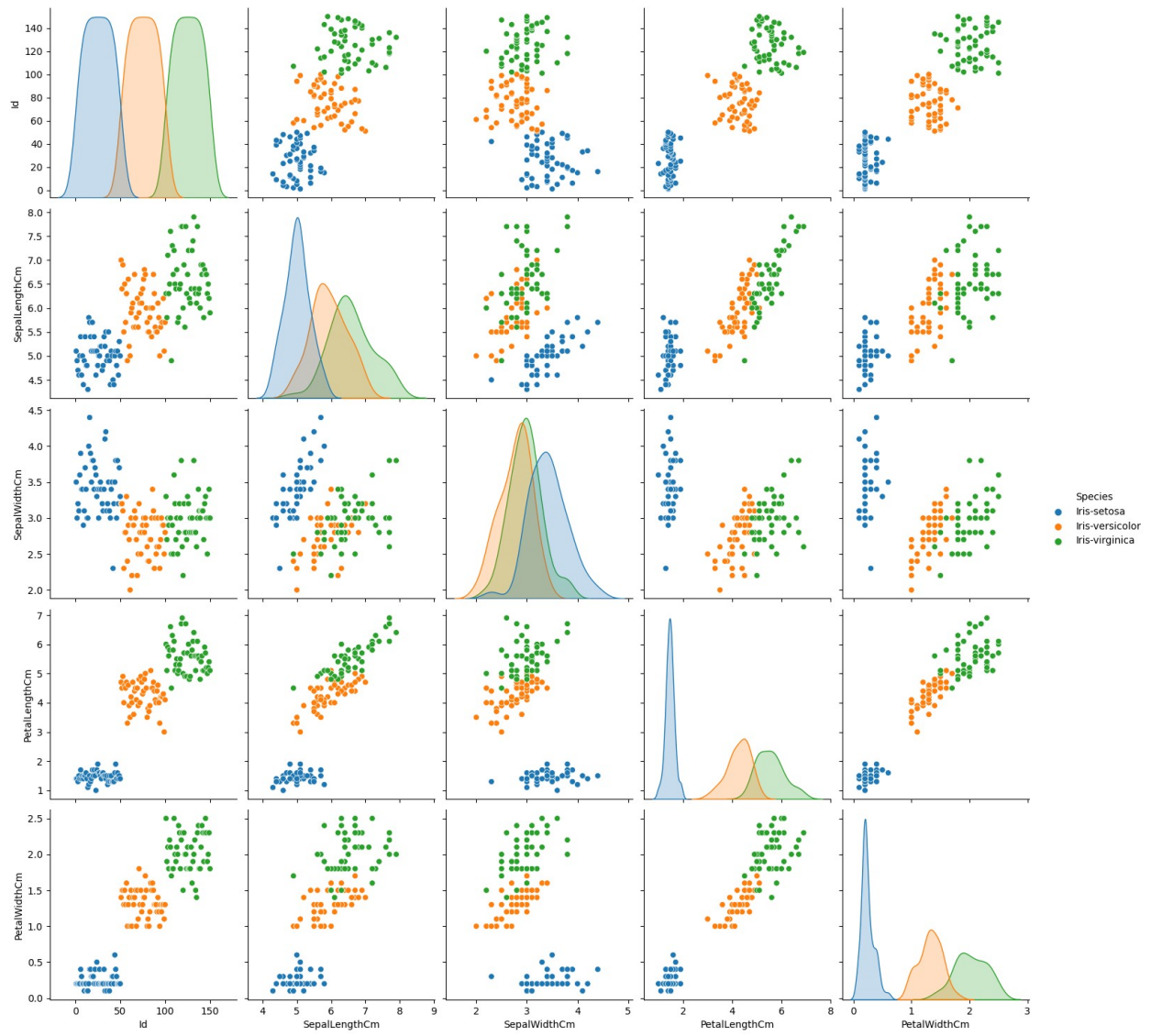


```
sns.scatterplot(x='PetalLengthCm',y='PetalWidthCm',hue='Species',data=
data)
```

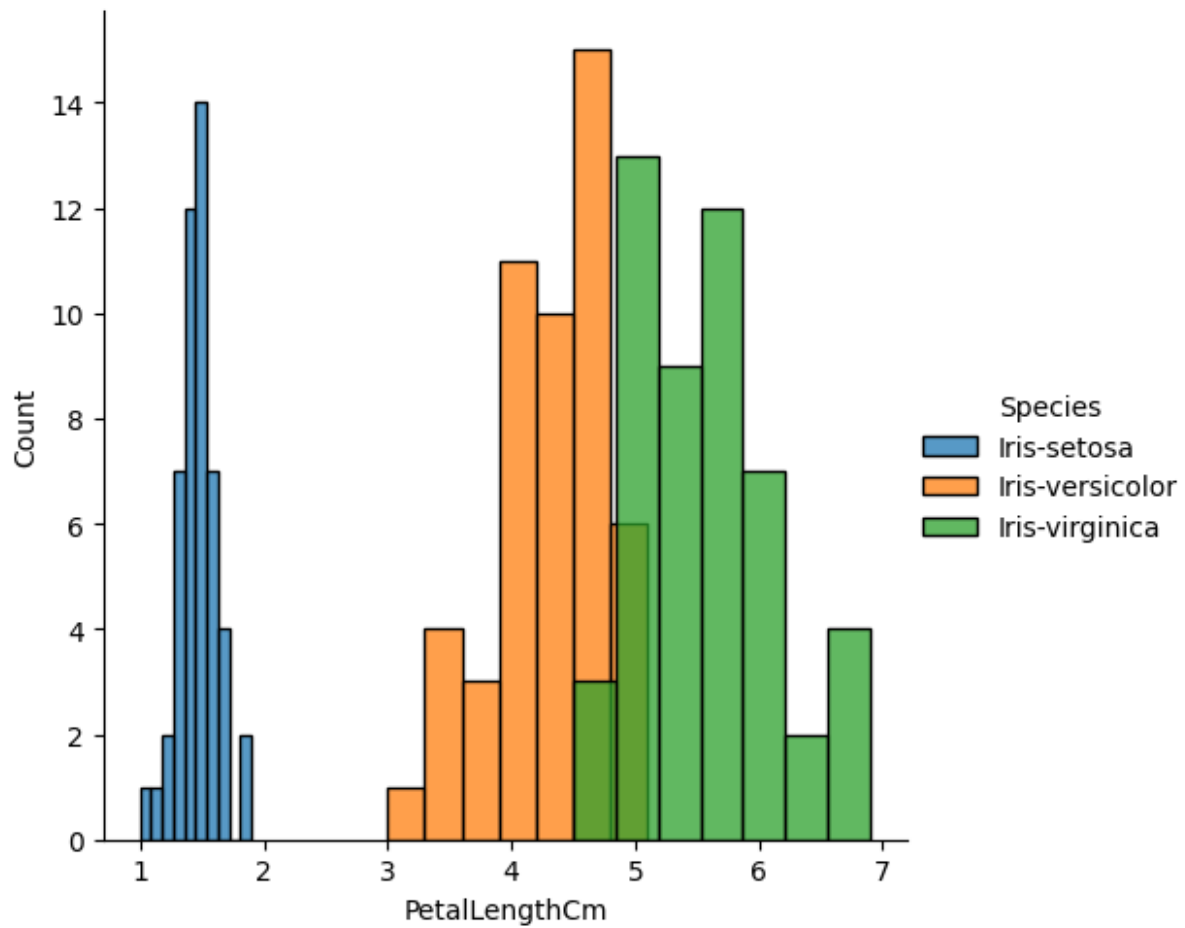
```
<AxesSubplot:xlabel='PetalLengthCm', ylabel='PetalWidthCm'>
```



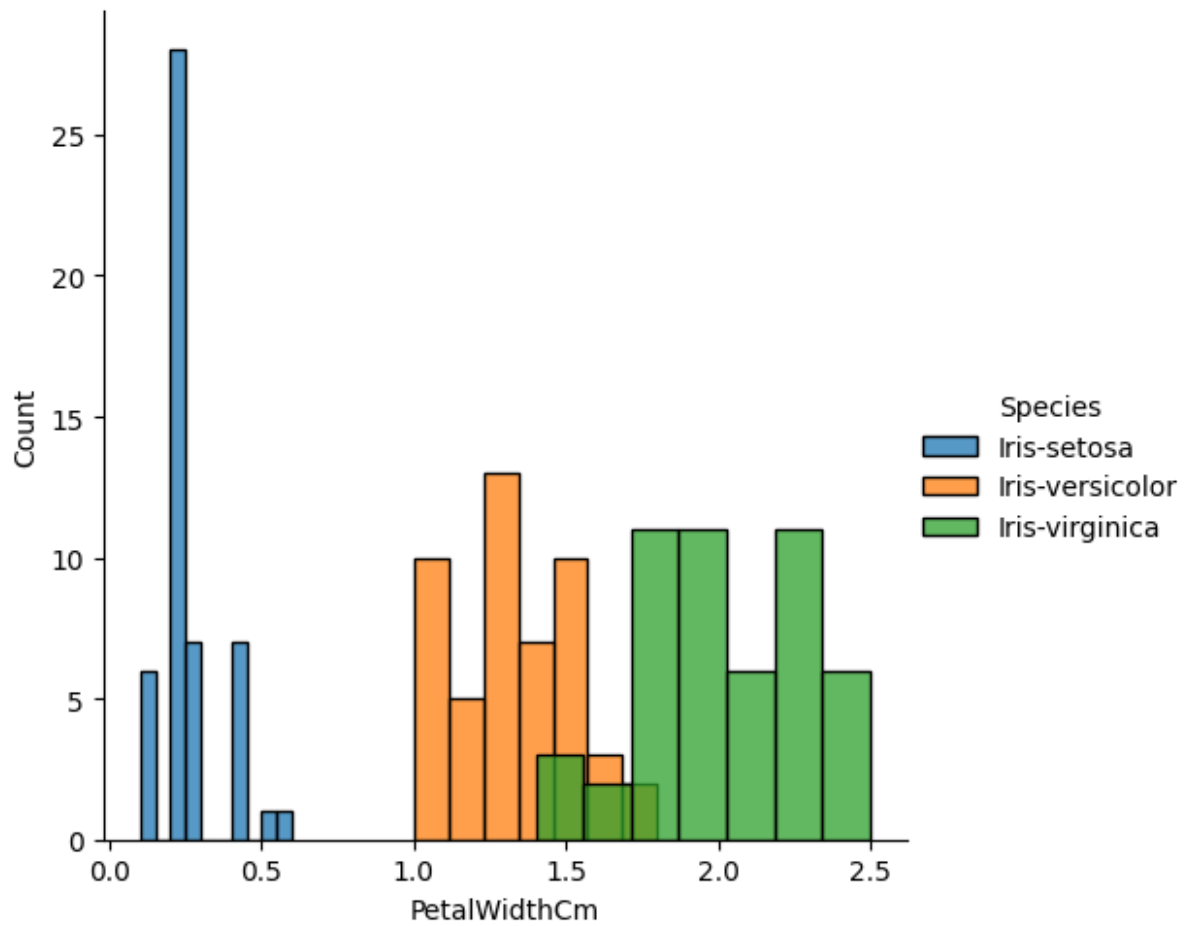
```
sns.pairplot(data,hue='Species',height=3);
```



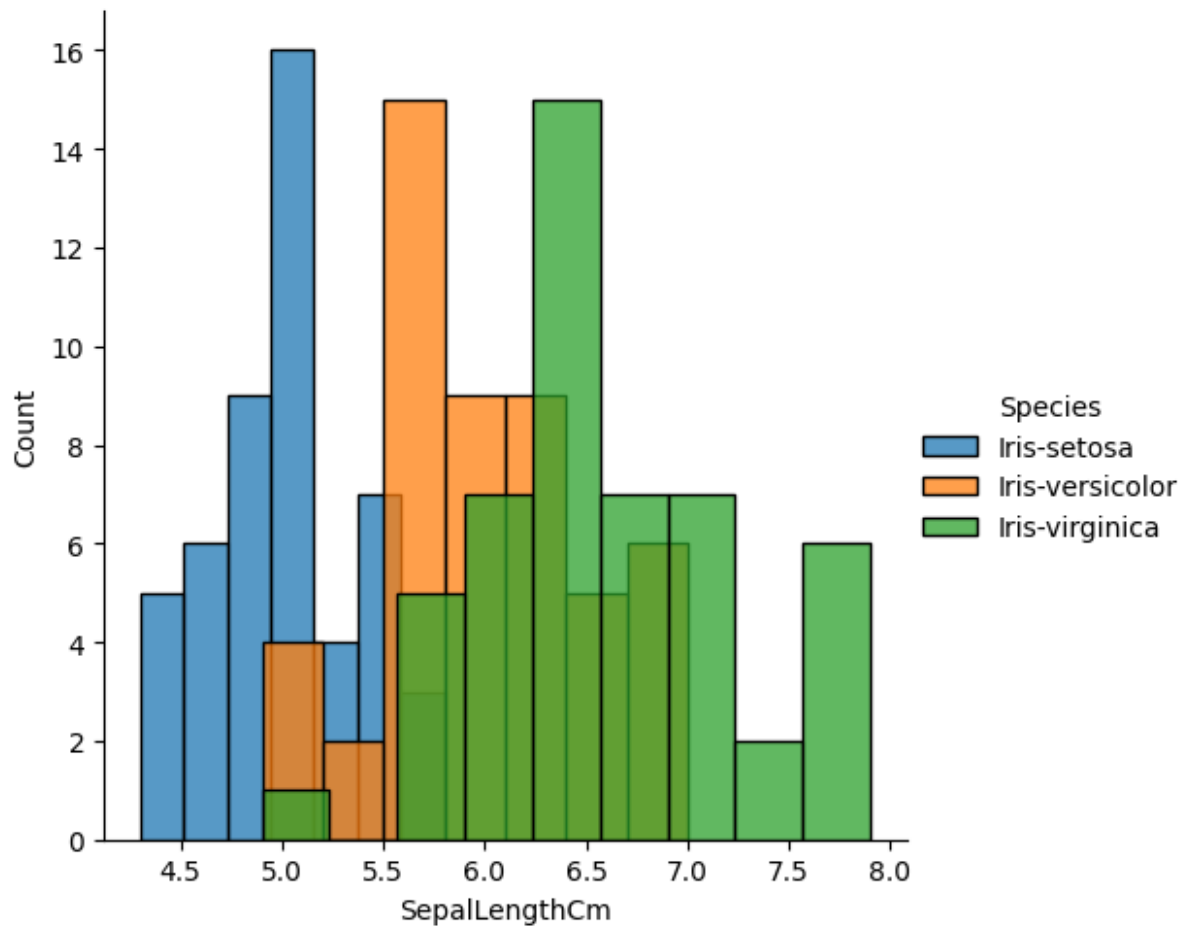
```
sns.FacetGrid(data,hue='Species',height=5).map(sns.histplot,'PetalLengthCm').add_legend(); plt.show();
```



```
sns.FacetGrid(data,hue='Species',height=5).map(sns.histplot,'PetalWidthCm').add_legend(); plt.show();
```



```
sns.FacetGrid(data,hue='Species',height=5).map(sns.histplot,'SepalLengthCm').add_legend(); plt.show();
```



```
sns.FacetGrid(data,hue='Species',height=5).map(sns.histplot,'SepalWidthCm').add_legend();  
plt.show();
```