

# visualization3\_pandas

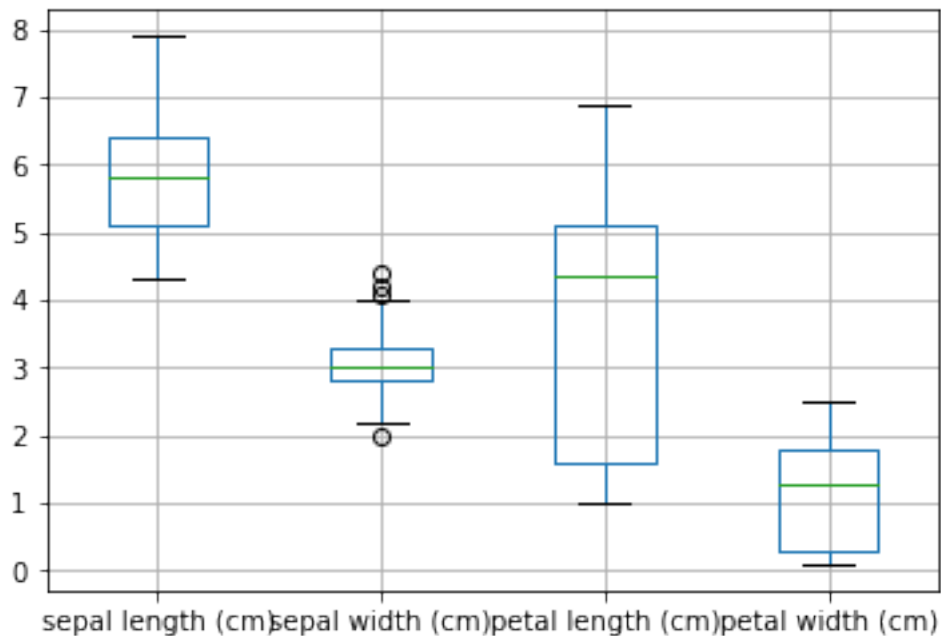
April 16, 2019

```
In [1]: import pandas as pd
        from sklearn.datasets import load_iris
        iris = load_iris()
        iris_df = pd.DataFrame(iris.data, columns=iris.feature_names)
        groups = list(iris.target)
        iris_df['groups'] = pd.Series([iris.target_names[k] for k in groups])
```

```
D:\Python\Lib\importlib\_bootstrap.py:219: RuntimeWarning: numpy.ufunc size changed, may indicate
  return f(*args, **kwargs)
D:\Python\Lib\importlib\_bootstrap.py:219: RuntimeWarning: numpy.ufunc size changed, may indicate
  return f(*args, **kwargs)
```

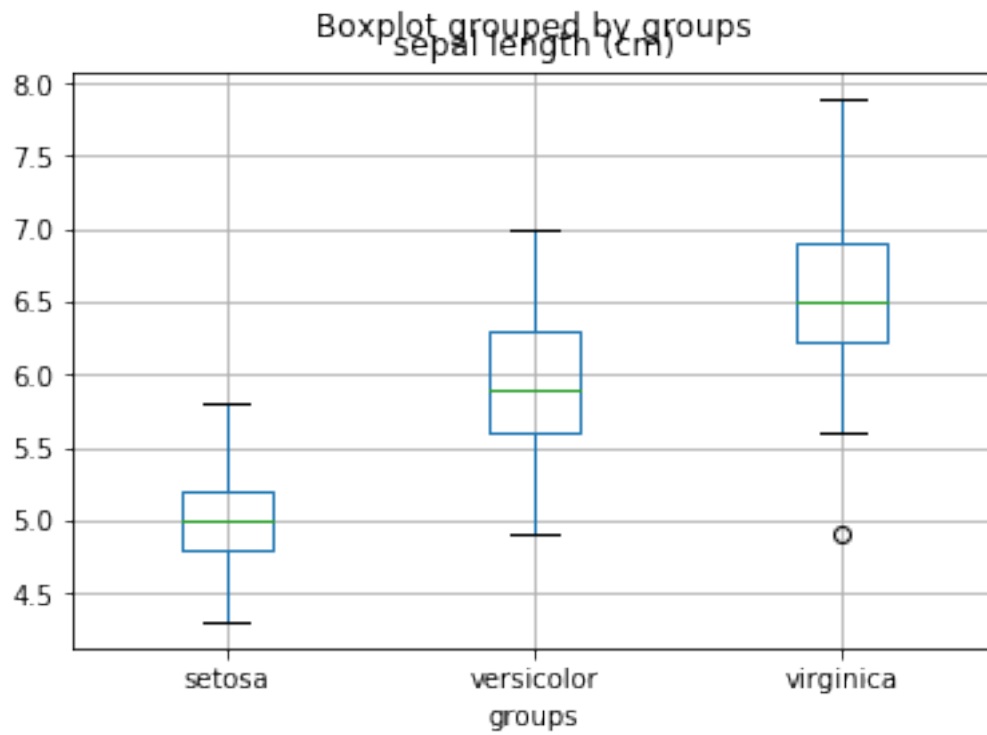
```
In [3]: boxplots = iris_df.boxplot(return_type='axes')
        boxplots
```

```
Out[3]: <matplotlib.axes._subplots.AxesSubplot at 0x1fd084e3748>
```



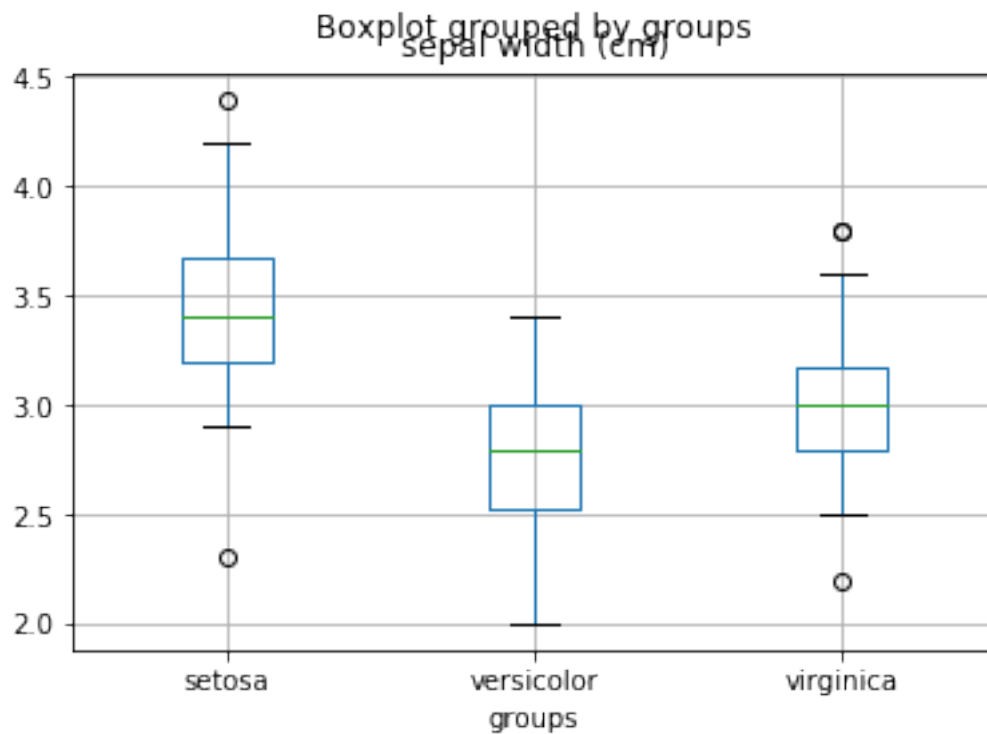
```
In [6]: boxplots = iris_df.boxplot(column='sepal length (cm)', by='groups', return_type='axes')
        boxplots
```

```
Out[6]: sepal length (cm)    AxesSubplot(0.1,0.15;0.8x0.75)
        dtype: object
```



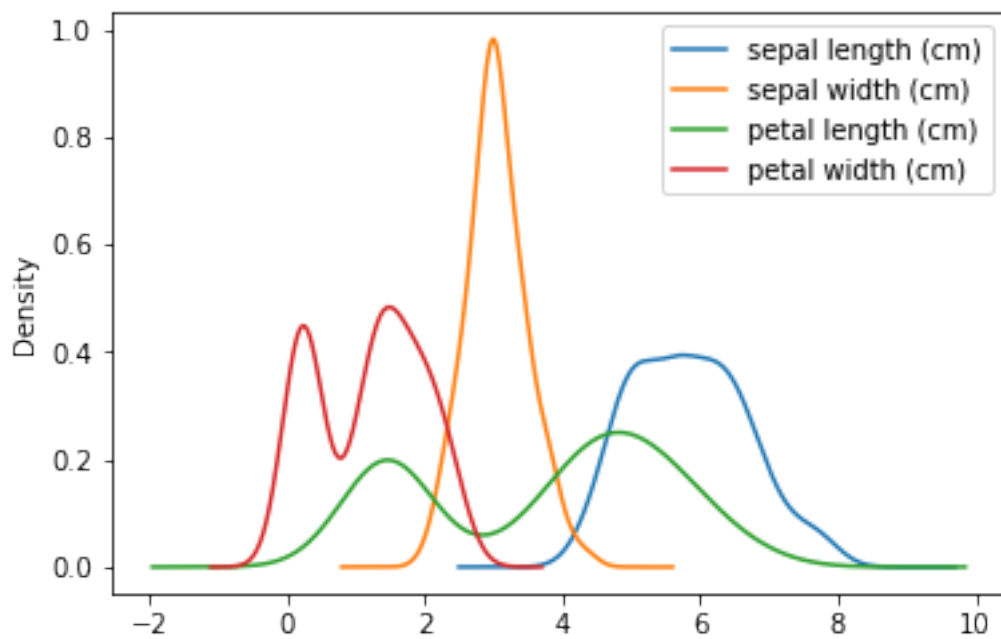
```
In [7]: boxplots = iris_df.boxplot(column='sepal width (cm)', by='groups', return_type='axes')
        boxplots
```

```
Out[7]: sepal width (cm)    AxesSubplot(0.1,0.15;0.8x0.75)
        dtype: object
```

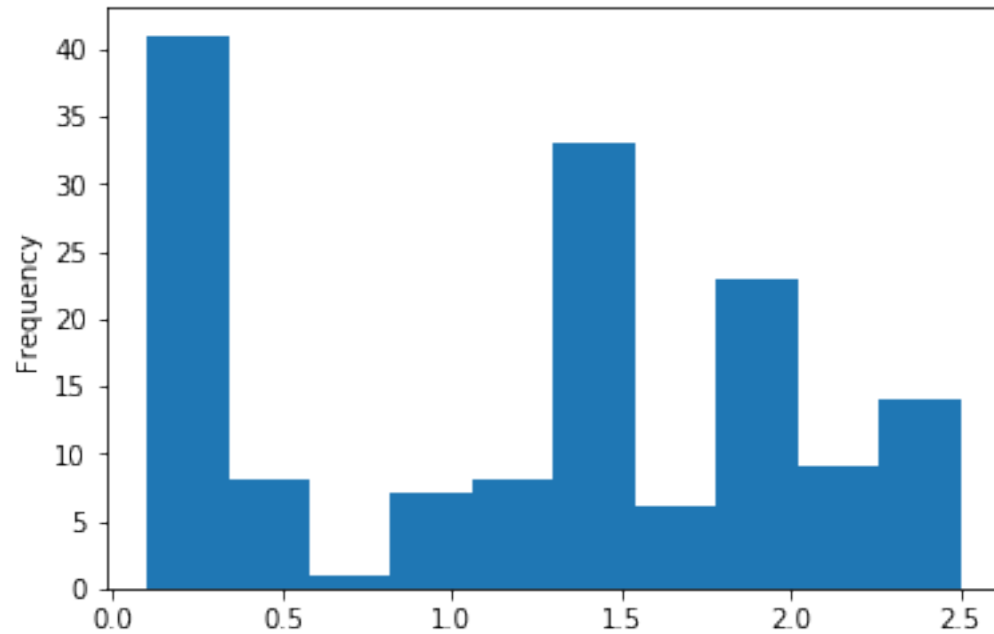


```
In [8]: densityplot = iris_df.plot(kind='density')
densityplot
```

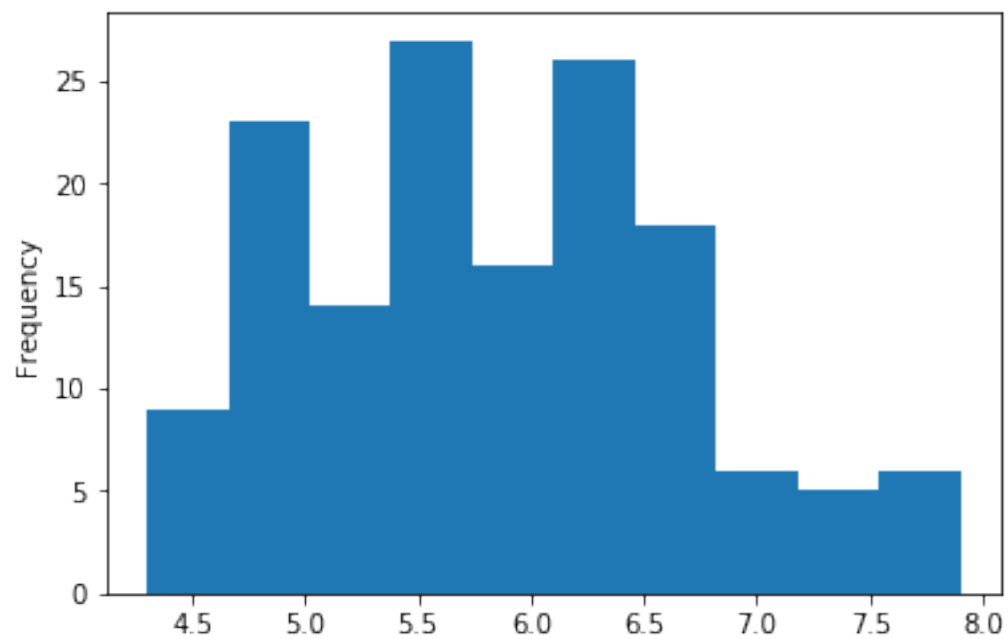
```
Out[8]: <matplotlib.axes._subplots.AxesSubplot at 0x1fd08898128>
```



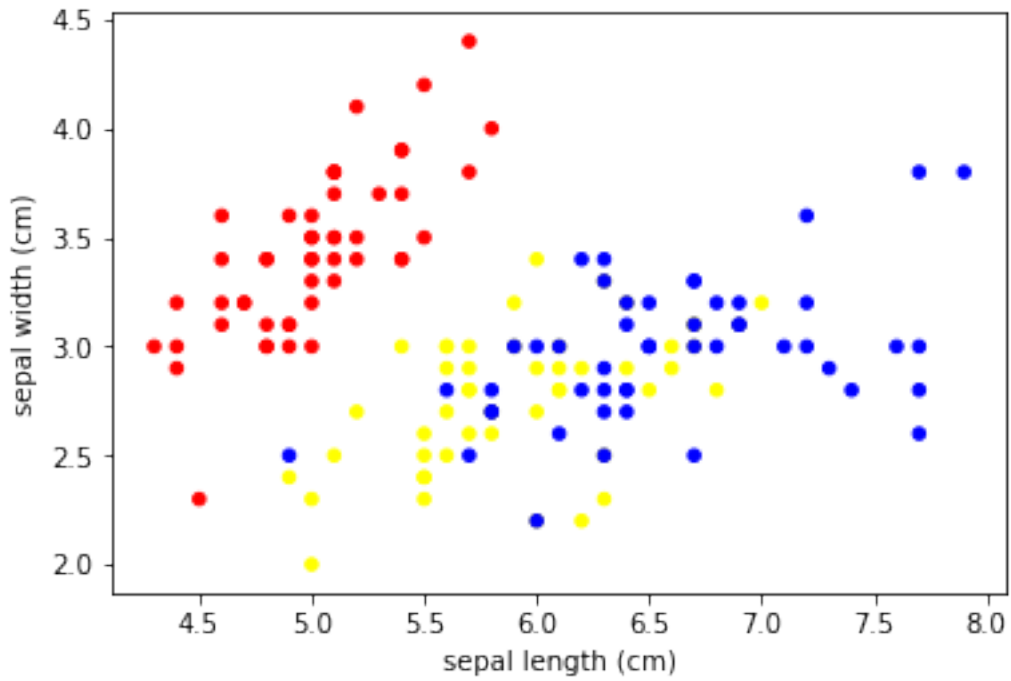
```
In [10]: single_distribution = iris_df['petal width (cm)'].plot(kind='hist', alpha=1)
```



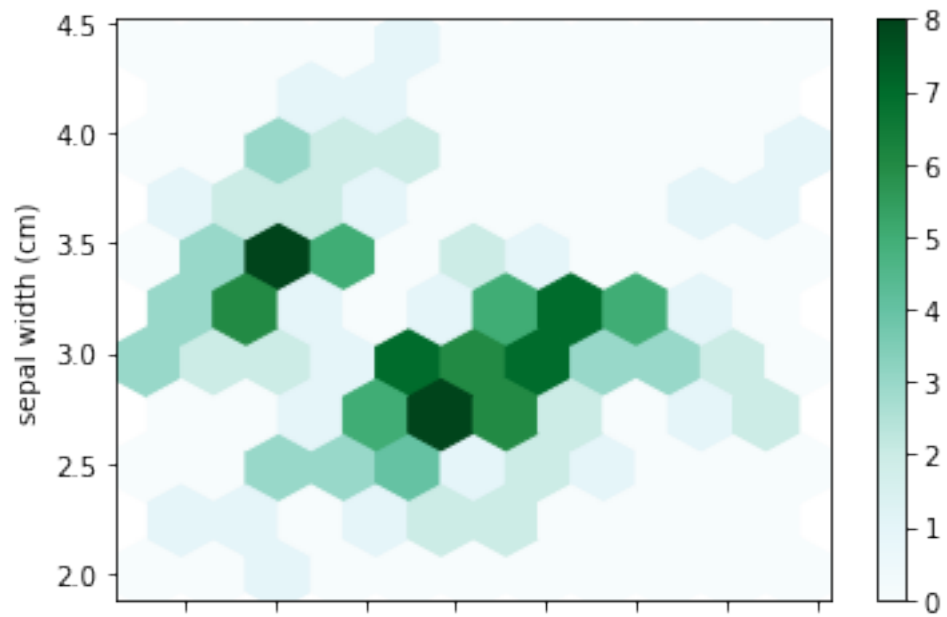
```
In [11]: single_distribution = iris_df['sepal length (cm)'].plot(kind='hist', alpha=1)
```



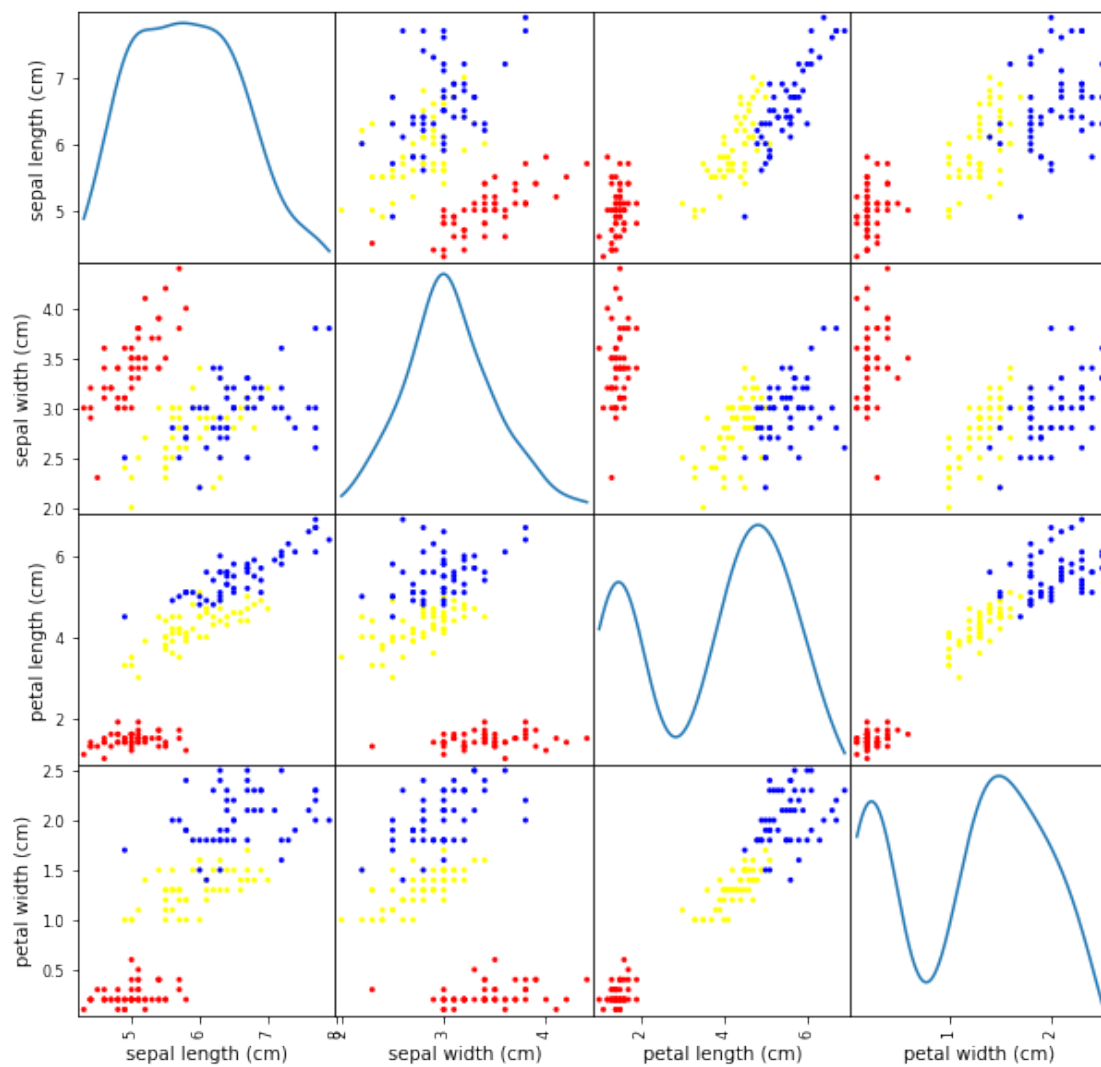
```
In [12]: colors_palette = {0:'red', 1:'yellow', 2:'blue'}
        colors = [colors_palette[c] for c in groups]
        simple_scatterplot = iris_df.plot(kind='scatter',x=0, y=1, c=colors)
```



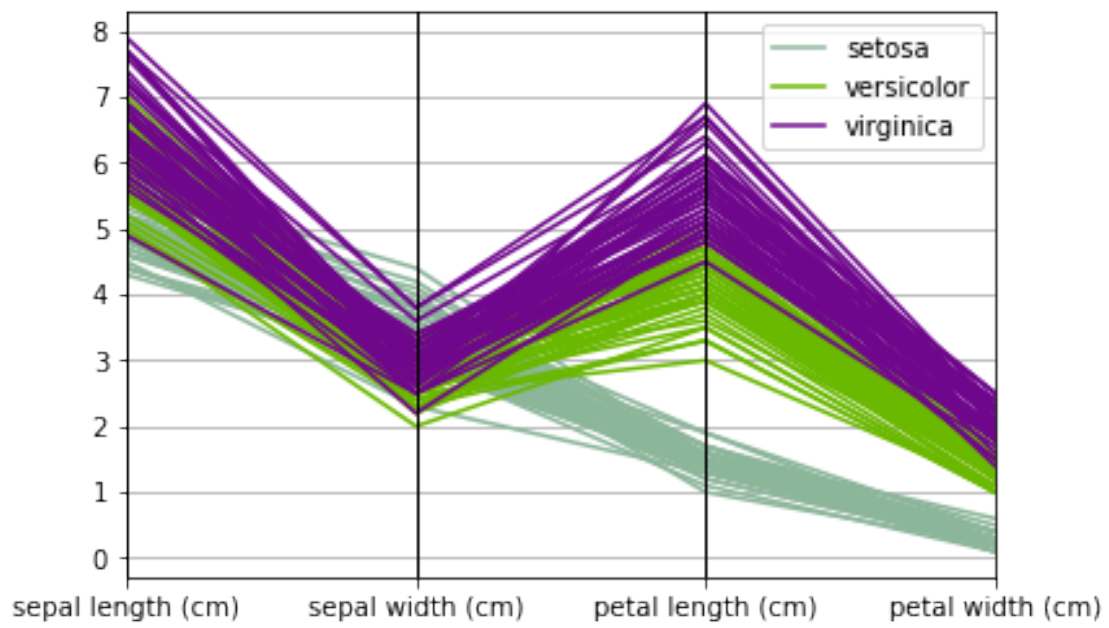
```
In [15]: hexbib = iris_df.plot(kind='hexbin',x=0, y=1, gridsize=10)
```



```
In [21]: from pandas.plotting import scatter_matrix
colors_palette = {0:'red', 1:'yellow', 2:'blue'}
colors = [colors_palette[c] for c in groups]
matrix_of_scatterplots = scatter_matrix(iris_df, alpha=1, figsize=(10,10), color=colors)
```



```
In [22]: from pandas.plotting import parallel_coordinates
         pll = parallel_coordinates(iris_df, 'groups')
```



In [ ]: