Lab 7 31-08-2022

August 31, 2022

[2]:
```
import pandas as pd
import numpy as np
```

0.1 6.

a)Load iris dataset into a dataframe

b)Take its descriptive statistics

c)delete all rows which have null values

d)select the Species classes,Count the no.of datas in each class

e)Map the species classes into 1,2 and 3

f)Print the standard deviation and mean of petal length

g)select all columns except species

[14]:
```
#a
i = pd.read_csv('iris.csv')
dp = pd.DataFrame(i)
print(dp)
#b
print("\ndescriptive stat:\n")
print(dp.info())
#c
dp1 = dp.dropna()
#d
print("\nsepecies count\n", dp1["species"].value_counts())
#e
dp1['species'] = dp1['species'].map({'setosa':1,'versico':2,'virginica':3})
print('\n\n',dp1)
#f
print("\n standard deviation of petal length:\n",dp1['petal_length'].std())
print("\n mean of petal length:\n",dp1['petal_length'].mean())
#g
dp2 = dp1.loc[ : , dp1.columns != 'species']
```

```
print('\nselecting all columns except species:\n',dp2)
```

```
     sepal_length  sepal_width  petal_length  petal_width    species
0             5.1          3.5           1.4          0.2     setosa
1             4.9          3.0           1.4          0.2     setosa
2             4.7          3.2           1.3          0.2     setosa
3             4.6          3.1           1.5          0.2     setosa
4             5.0          3.6           1.4          0.2     setosa
..            …            …             …            …        …
145           6.7          3.0           5.2          2.3  virginica
146           6.3          2.5           5.0          1.9  virginica
147           6.5          3.0           5.2          2.0  virginica
148           6.2          3.4           5.4          2.3  virginica
149           5.9          3.0           5.1          1.8  virginica

[150 rows x 5 columns]

descriptive stat:

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 5 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   sepal_length  150 non-null    float64
 1   sepal_width   150 non-null    float64
 2   petal_length  150 non-null    float64
 3   petal_width   150 non-null    float64
 4   species       150 non-null    object
dtypes: float64(4), object(1)
memory usage: 6.0+ KB
None

sepecies count
 virginica     50
versicolor    50
setosa        50
Name: species, dtype: int64


      sepal_length  sepal_width  petal_length  petal_width  species
0             5.1          3.5           1.4          0.2      1.0
1             4.9          3.0           1.4          0.2      1.0
2             4.7          3.2           1.3          0.2      1.0
3             4.6          3.1           1.5          0.2      1.0
4             5.0          3.6           1.4          0.2      1.0
..            …            …             …            …        …
```

```
145           6.7          3.0           5.2          2.3      3.0
146           6.3          2.5           5.0          1.9      3.0
147           6.5          3.0           5.2          2.0      3.0
148           6.2          3.4           5.4          2.3      3.0
149           5.9          3.0           5.1          1.8      3.0

[150 rows x 5 columns]

 standard deviation of petal length:
 1.7644204199522617

 mean of petal length:
 3.7586666666666693

selecting all columns except species:
      sepal_length  sepal_width  petal_length  petal_width
0             5.1          3.5           1.4          0.2
1             4.9          3.0           1.4          0.2
2             4.7          3.2           1.3          0.2
3             4.6          3.1           1.5          0.2
4             5.0          3.6           1.4          0.2
..            …            …             …            …
145           6.7          3.0           5.2          2.3
146           6.3          2.5           5.0          1.9
147           6.5          3.0           5.2          2.0
148           6.2          3.4           5.4          2.3
149           5.9          3.0           5.1          1.8

[150 rows x 4 columns]
```