lab-3-1

April 19, 2024

[1]:	import pandas as pd											
[6]:	<pre>df= pd.read_csv("Customer Segmentation.csv")</pre>											
[7]:	df.head()											
[7]:	Customer	ID G	Gender	Age .	Annual	Income	(k\$)	Spending	Score	e (1-100	0)	
	0) 1 Male 19					15	39				
	1	2 Male 21					15 81					
	2	3 F	Temale	20			16				6	
	3	4 F	Gemale	23			16			-	77	
	4	5 F	emale	31			17			2	40	
[8]:	df.tail()											
[8]:	CustomerID Gender Age Annual Income (k\$) Spending Score (1-100)											
	195						120			79		
	196	197	Female				126				28	
	197	198	Male	32			126				74	
	198	199	Male	32			137				18	
	199	200	Male	30			137				83	
[9]:	df.info											
[9]:	 bound method	od Da	ataFrame	.info	of	Custo	merID	Gender	Age	Annual	Income	(k\$)
	Spending Sco	ore ((1-100)									
	0	1	Male	19			15				39	
	1	2	Male	21			15				81	
	2	3	Female	20			16				6	
	3	4	Female	23			16				77	
	4	5	Female	31			17				40	
	• •	•••				•••						
	195	196	Female				120				79	
	196	197	Female				126				28	
	197	198	Male				126				74	
	198	199	Male				137				18	
	199	200	Male	30			137				83	

```
[10]: df.shape
[10]: (200, 5)
[11]: df.describe
[11]: <bound method NDFrame.describe of
                                               CustomerID Gender Age Annual Income
      (k$) Spending Score (1-100)
      0
                          Male
                                                                               39
                     1
                                 19
                                                      15
                          Male
      1
                     2
                                 21
                                                                               81
                                                      15
                     3 Female
      2
                                 20
                                                      16
                                                                                6
                     4 Female
                                                                               77
      3
                                 23
                                                      16
      4
                    5 Female
                                 31
                                                      17
                                                                               40
                                                                               79
      195
                  196 Female
                                 35
                                                     120
      196
                  197
                       Female
                                 45
                                                     126
                                                                               28
                                                                               74
      197
                  198
                          Male
                                 32
                                                     126
      198
                  199
                          Male
                                 32
                                                     137
                                                                               18
      199
                  200
                          Male
                                 30
                                                                               83
                                                     137
      [200 rows x 5 columns]>
[12]: df.dtypes
[12]: CustomerID
                                  int64
      Gender
                                 object
      Age
                                  int64
      Annual Income (k$)
                                  int64
      Spending Score (1-100)
                                  int64
      dtype: object
[21]: summary = df.groupby('Spending Score (1-100)')['Age'].
       →agg(['mean','median','min','max'])
      print(summary)
                              mean median min max
     Spending Score (1-100)
     1
                              35.5
                                       35.5
                                              34
                                                   37
     3
                              64.0
                                       64.0
                                              64
                                                   64
     4
                              56.5
                                       56.5
                                                   60
                                              53
     5
                              35.5
                                       33.0
                                                   57
                                              19
                              27.5
     6
                                       27.5
                                              20
                                                   35
```

```
94
                        23.0
                                 23.0
                                             23
                                        23
95
                        36.5
                                 36.5
                                             40
                                        33
97
                        29.0
                                 29.0
                                        28
                                             30
98
                        35.0
                                 35.0
                                        35
                                             35
99
                        35.0
                                 35.0
                                        35
                                             35
```

[84 rows x 4 columns]

[]:[