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Numpy

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Numpy / 230901102 Engineering Features 1&2.ipynb



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9ed6c90 · 2 days ago



180 lines (180 loc) · 4.79 KB

Preview

Code

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```
In [1]: import pandas as pd
import numpy as np
#creating a dummy dataframe of 15 numbers randomly
#ranging from 1-100 for age
df=pd.DataFrame({'Age':[42,15,67,55,1,29,75,89,4,10,15,38,22,77]})
#printing DataFrame before sorting Continuous
#to Categories
print(df)
#A column of name 'Label' is created in DataFrame
#Categorizing Age into 4 Categories
#Baby/Toddler:(0,3),0 is excluded & 63 included
#Elderly:[63,99],63 is excluded & 99 is included
df['Label']=pd.cut(x=df['Age'],bins=[0,3,17,63,99],labels=['Baby/Toddler',
#Printing DataFrame after sorting continuous to
#Categories
print("After:\n")
print(df)
#check the number of values in each bin
print("Categories:\n")
print(df['Label'].value_counts())
```

```
Age
0    42
1    15
2    67
3    55
4     1
5    29
6    75
7    89
8     4
9    10
10   15
11   38
12   22
13   77
```

After:

	Age	Label
0	42	Adult
1	15	child
2	67	Elderly
3	55	Adult
4	1	Baby/Toddler
5	29	Adult
6	75	Elderly
7	89	Elderly
8	4	child
9	10	child
10	15	child
11	38	Adult
12	22	Adult
13	77	Elderly

Categories:

Label	
Adult	5
child	4
Elderly	4
Baby/Toddler	1

Name: count, dtype: int64

```

In [2]: #importing pandas and numpy libraries
import pandas as pd
import numpy as np
#creating a dummy DataFrame of 12 numbers randomly
#ranging from 150-180 for height
df=pd.DataFrame({'Height':[150.4,157.6,170,176,164.2,155,159.2,175,162.4,176,153,170.9]})
#Printing DataFrame beofre Sorting Continuous to Categories
print("Before:")
print(df)
# A column of name 'Label' is created in DataFrame
# Categorizing height into 3 categories
# Short:(150,157),150 is excluded & 157 is included
# Average:(157,169),157 is excluded & 169 is included
# Tall:(169,180),169 is excluded & 180 is included
df['Label']=pd.cut(x=df['Height'],bins=[150,157,169,180],labels=['Short','Average','Tall'])
#printing dataframe after sorting continuous to categorie
print("After:")
print(df)
#Checking the number of values in each bin
print("Categories:")
print(df['Label'].value_counts())

```

Before:

	Height
0	150.4
1	157.6
2	170.0
3	176.0
4	164.2
5	155.0
6	159.2
7	175.0
8	162.4
9	176.0
10	153.0
11	170.9

After:

	Height	Label
0	150.4	Short
1	157.6	Average
2	170.0	Tall
3	176.0	Tall
4	164.2	Average
5	155.0	Short
6	159.2	Average
7	175.0	Tall
8	162.4	Average
9	176.0	Tall
10	153.0	Short
11	170.9	Tall

Categories:

Label

Tall 5

Average 4

Short 3

Name: count, dtype: int64

In []: