

DATA SCIENCE SKILL-1

A) INTRODUCTION TO PANDAS

B) Include .csv file in python

DS SKILL-1 LMS.ipynb

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+ Code + Text

[19] dataset=pd.read_csv('MOTORS.csv')

[20] dataset

	flow rate(lit/min; /	speed	capacity	voltage	current	temprature	capacity in watt	performance
0	40	1400	0.5	120	3.104167	10	372.5	0
1	80	2800	1.0	240	3.104167	20	745.0	0
2	40	1400	0.5	120	3.104167	10	372.5	0
3	160	5600	2.0	480	3.104167	40	1490.0	1
4	40	1400	0.5	120	3.104167	10	372.5	0
...
194	80	2800	1.0	240	3.104167	20	745.0	0
195	40	1400	0.5	120	3.104167	10	372.5	0
196	80	2800	1.0	240	3.104167	20	745.0	0
197	160	5600	2.0	480	3.104167	40	1490.0	1
198	80	2800	1.0	240	3.104167	20	745.0	0

199 rows x 8 columns

- 1. Use series method to convert the following list ['a','b','c','d']

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[1] import pandas as pd
import numpy as np

[4] list=['a','b','c','d']
series=pd.Series(list)
print(series)

```
0    a
1    b
2    c
3    d
dtype: object
```

- 2. Given the lists which contain names of students and their scored marks you have to create data frames which club them all using pandas. student list is [' Name 1', ' Name 2', ' Name 3', ' Name 4', ' Name 5', ' Name 6'] and you are given a 2d matrix which contain their marks. Their marks are [[67,89,68,95], [87,94,97,76], [77,85,99,74], [90,89,92,78], [83,97,80,98],[90,90,80,87]] and subjects list containing ['DS','AI','MPII', 'CNS']

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[8] d=['radha','krishna','kowshik','sudheer','chandu','ashok']
m=[[67,89,68,95], [87,94,97,76], [77,85,99,74], [90,89,92,78], [83,97,80,98],[90,90,80,87]]
s=['DS','AI','MPII','CNS']

[9] df=pd.DataFrame(data=m,index=d,columns=s)

[10] df

	DS	AI	MPII	CNS
radha	67	89	68	95
krishna	87	94	97	76
kowshik	77	85	99	74
sudheer	90	89	92	78
chandu	83	97	80	98
ashok	90	90	80	87

- 3. Add the TS , total columns to the data frame from which TS is the sum of DS,AI,MPII and total is the sum of all subjects?

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```
[13] df['TS']=df['DS']+df['AI']+df['MPII']
      df['TOTAL']=df['DS']+df['AI']+df['MPII']+df['CNS']+df['TS']
```

```
[14] df
```

	DS	AI	MPII	CNS	TS	TOTAL
radha	67	89	68	95	224	543
krishna	87	94	97	76	278	632
kowshik	77	85	99	74	261	596
sudheer	90	89	92	78	271	620
chandu	83	97	80	98	260	618
ashok	90	90	80	87	260	607

- 4. Display only the marks scored by Name 2 and Name3?

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```
[16] df.loc[['krishna','kowshik']]
```

	DS	AI	MPII	CNS	TS	TOTAL
krishna	87	94	97	76	278	632
kowshik	77	85	99	74	261	596

- 5. Display all the students marks who scored 90 + marks in DS?

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```
[17] df[df['DS']>90]
```

	DS	AI	MPII	CNS	TS	TOTAL
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- 6. DS teacher wants to know the total marks achieved by students in DS , Help her by using the sum method in data frame

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```
[18] sum(df['DS'])
```

494