

```
[6]: import pandas as pd
df = pd.read_csv('placement-dataset.csv')

print(df)
```

	sr	cgpa	iq	placement
0	0	6.8	123.0	1.0
1	1	5.9	106.0	0.0
2	2	5.3	121.0	0.0
3	3	7.4	132.0	1.0
4	4	5.8	142.0	0.0
..	..	...	...	...
95	95	4.3	200.0	0.0
96	96	4.4	42.0	0.0
97	97	6.7	182.0	1.0
98	98	6.3	103.0	1.0
99	99	6.2	113.0	1.0

[100 rows x 4 columns]

df.isnull().sum() ...

```
[16]: sr      0
      cgpa    1
      iq      0
      placement 2
      dtype: int64
```

```
[7]: print(df.notnull().sum())
```

```
sr      100
cgpa     99
iq       100
placement 98
dtype: int64
```

```
[8]:
```

```
df_cleaned = df.dropna()
print(df_cleaned)
print(df_cleaned.notnull().sum())
```

	sr	cgpa	iq	placement
0	0	6.8	123.0	1.0
1	1	5.9	106.0	0.0
2	2	5.3	121.0	0.0
3	3	7.4	132.0	1.0
4	4	5.8	142.0	0.0

```

.. .. ... ..
95 95 4.3 200.0 0.0
96 96 4.4 42.0 0.0
97 97 6.7 182.0 1.0
98 98 6.3 103.0 1.0
99 99 6.2 113.0 1.0

```

```

[97 rows x 4 columns]
sr      97
cgpa     97
iq       97
placement 97
dtype: int64

```

```

[10]: df_filled = df.fillna(0)
print(df_filled)
print(df_filled.notnull().sum())

```

```

   sr  cgpa   iq  placement
0   0   6.8 123.0         1.0
1   1   5.9 106.0         0.0
2   2   5.3 121.0         0.0
3   3   7.4 132.0         1.0
4   4   5.8 142.0         0.0
..  ..  ...  ...  ...
95 95   4.3 200.0         0.0
96 96   4.4  42.0         0.0
97 97   6.7 182.0         1.0
98 98   6.3 103.0         1.0
99 99   6.2 113.0         1.0

```

```

[100 rows x 4 columns]
sr      100
cgpa     100
iq       100
placement 100
dtype: int64

```

```

[11]: df_replaced = df.replace('0', '1')
print(df_replaced)

```

```

   sr  cgpa   iq  placement
0   0   6.8 123.0         1.0
1   1   5.9 106.0         0.0
2   2   5.3 121.0         0.0
3   3   7.4 132.0         1.0
4   4   5.8 142.0         0.0
..  ..  ...  ...  ...
95 95   4.3 200.0         0.0
96 96   4.4  42.0         0.0
97 97   6.7 182.0         1.0
98 98   6.3 103.0         1.0
99 99   6.2 113.0         1.0

```

```

[100 rows x 4 columns]

```

```

[12]: df_interpolated = df.interpolate()
print(df_interpolated)

```

```
print(df_interpolated)
```

	sr	cgpa	iq	placement
0	0	6.8	123.0	1.0
1	1	5.9	106.0	0.0
2	2	5.3	121.0	0.0
3	3	7.4	132.0	1.0
4	4	5.8	142.0	0.0
..	..	...	...	...
95	95	4.3	200.0	0.0
96	96	4.4	42.0	0.0
97	97	6.7	182.0	1.0
98	98	6.3	103.0	1.0
99	99	6.2	113.0	1.0

[100 rows x 4 columns]

```
[14]: nan_bool_series = pd.isna(df)
print(nan_bool_series)
```

	sr	cgpa	iq	placement
0	False	False	False	False
1	False	False	False	False
2	False	False	False	False
3	False	False	False	False
4	False	False	False	False
..	...	...	...	...
95	False	False	False	False
96	False	False	False	False
97	False	False	False	False
98	False	False	False	False
99	False	False	False	False

[100 rows x 4 columns]

```
[23]: filtered_data = df[df['cgpa'] > 6]
print(filtered_data)
```

	sr	cgpa	iq	placement
0	0	6.8	123.0	1.0
3	3	7.4	132.0	1.0
5	5	7.1	48.0	1.0
8	8	6.1	156.0	0.0
11	11	6.9	138.0	1.0
13	13	6.4	116.0	1.0
14	14	6.1	103.0	0.0
20	20	6.6	120.0	1.0
21	21	7.1	151.0	1.0
26	26	7.0	199.0	1.0
29	29	7.0	112.0	1.0
30	30	7.6	128.0	1.0
32	32	7.0	139.0	1.0
35	35	6.8	90.0	1.0
37	37	8.1	149.0	1.0
38	38	6.5	160.0	1.0
42	42	7.6	89.0	1.0
43	43	6.8	141.0	1.0
44	44	7.5	61.0	1.0
48	48	6.6	138.0	1.0

52	52	7.0	175.0	1.0
53	53	8.3	168.0	1.0
54	54	6.4	141.0	1.0
55	55	7.8	114.0	1.0
56	56	6.1	65.0	0.0
57	57	6.5	130.0	1.0
58	58	8.0	79.0	1.0
60	60	6.9	139.0	1.0
61	61	7.3	137.0	1.0
63	63	6.3	128.0	1.0
64	64	7.0	64.0	1.0
65	65	8.1	166.0	1.0
66	66	6.9	96.0	1.0
69	69	8.5	120.0	1.0
70	70	6.3	127.0	1.0
71	71	6.1	132.0	1.0
72	72	7.3	116.0	1.0
74	74	6.7	154.0	1.0
77	77	7.3	50.0	1.0
78	78	6.1	81.0	0.0
79	79	6.5	90.0	1.0
82	82	6.5	37.0	1.0
83	83	7.5	130.0	1.0
90	90	7.3	86.0	1.0
91	91	7.5	158.0	1.0
93	93	6.8	112.0	1.0
97	97	6.7	182.0	1.0
98	98	6.3	103.0	1.0
99	99	6.2	113.0	1.0

```
[25]: data_dict = {
      'sr': [1, 2, 3, 4, 5, 6],
      'cgpa': [6.8, 5.9, 5.3, 7.4, 5.8, 7.1],
      'iq': [123.0, 106.0, 121.0, 132.0, 142.0, 48.0],
      'placement': [1, 0, 0, 1, 0, 1]
    }
    print(data_dict)

{'sr': [1, 2, 3, 4, 5, 6], 'cgpa': [6.8, 5.9, 5.3, 7.4, 5.8, 7.1], 'iq': [123.0, 106.0, 121.0, 132.0, 142.0, 48.0], 'placement': [1, 0, 0, 1, 0, 1]}
```

```
[26]: new_df = pd.DataFrame(data_dict)
    print(new_df)
```

	sr	cgpa	iq	placement
0	1	6.8	123.0	1
1	2	5.9	106.0	0
2	3	5.3	121.0	0
3	4	7.4	132.0	1
4	5	5.8	142.0	0
5	6	7.1	48.0	1

```
[27]: new_df_filled = new_df.fillna(0)
    print(new_df_filled)
```

	sr	cgpa	iq	placement
0	1	6.8	123.0	1
1	2	5.9	106.0	0
2	3	5.3	121.0	0
3	4	7.4	132.0	1

4	5	5.8	142.0	0
5	6	7.1	48.0	1

[ ]:

