

## ▼ Marvel Superheroes Character-Data Analysis

```
#loading the required libraries
import pandas as pd
import matplotlib.pyplot as plt
```

```
# Load the marvel character_stats dataset
marvel=pd.read_csv('/content/sample_data/charcters_stats.csv')
```

```
# Extracting the first five rows of the datasets
marvel.head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat
0	3-D Man	good	50	31	43	32	25	52
1	A-Bomb	good	38	100	17	80	17	64
2	Abe Sapien	good	88	14	35	42	35	85
3	Abin Sur	good	50	90	53	64	84	65
4	Abomination	bad	63	80	53	90	55	95

```
# check the how many rows and columns in this datasets using shape method
marvel.shape
```

```
(611, 9)
```

```
# check the frequency of the Alignment in this datasets
marvel['Alignment'].value_counts()
```

```
good      432
bad       165
neutral    11
Name: Alignment, dtype: int64
```

```
marvel[marvel['Alignment']=='good']
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	T
0	3-D Man	good	50	31	43	32	25	52	
1	A-Bomb	good	38	100	17	80	17	64	
2	Abe Sapien	good	88	14	35	42	35	85	
3	Abin Sur	good	50	90	53	64	84	65	
6	Adam Monroe	good	63	10	12	100	71	64	
...	...	...	...	...	...	...	...	...	...
604	X-Man	good	88	53	53	95	92	84	
606	Yellowjacket	good	88	10	12	28	12	14	

```
good=marvel[marvel['Alignment']=='good']
```

```
good.head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
0	3-D Man	good	50	31	43	32	25	52	233
1	A-Bomb	good	38	100	17	80	17	64	316
2	Abe Sapien	good	88	14	35	42	35	85	299
3	Abin Sur	good	50	90	53	64	84	65	406
6	Adam	good	63	10	12	100	71	64	320

```
good.sort_values(by=['Speed'],ascending=False)
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	
231	Flash III	good	63	10	100	60	83	32	
304	Jack of Hearts	good	63	55	100	30	70	30	

```
good.sort_values(by=['Speed'],ascending=False).head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	To
231	Flash III	good	63	10	100	60	83	32	
304	Jack of Hearts	good	63	55	100	30	70	30	
295	Impulse	good	50	10	100	60	63	60	
525	Stardust	good	88	85	100	110	100	85	
447	Quicksilver	good	63	28	100	60	57	56	
376	Hawkwoman	good	4	4	4	4	0	4	

```
good.sort_values(by=['Power'],ascending=False).head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Tot
609	Zatanna	good	75	10	23	28	100	56	2
546	Thor	good	69	100	92	100	100	85	5
511	Spawn	good	75	60	50	90	100	95	4
69	Beta Ray Bill	good	63	80	35	95	100	84	4
70	Beyonder	good	88	100	23	100	100	56	4

```
good_max_power_full=good[good['Power']==100]
```

```
good_max_power_full.shape
```

(33, 9)

```
good_max_power_full
```

70	Beyonder	good	88	100	23	100	100	5
85	Black Bolt	good	75	67	100	84	100	5
129	Cable	good	88	48	23	56	100	8
185	Deadman	good	50	10	33	100	100	4
196	Doctor Fate	good	81	16	25	80	100	5
198	Doctor Strange	good	100	10	12	84	100	6
204	Dr Manhattan	good	88	32	42	95	100	4
226	Firestorm	good	50	53	58	56	100	4
251	Goku	good	56	100	75	90	100	10
266	Hal Jordan	good	63	90	53	64	100	5
294	Iceman	good	63	32	53	100	100	6
299	Iron Man	good	100	85	58	85	100	6
306	Jean Grey	good	100	80	67	100	100	7
327	Kilowog	good	81	90	53	42	100	8
361	Martian Manhunter	good	100	100	96	100	100	8
362	Marvel Girl	good	63	85	47	42	100	8
383	Miss Martian	good	63	85	58	100	100	4
408	Naruto Uzumaki	good	50	80	32	80	100	10
417	Nova	good	100	85	67	101	100	8
418	Nova	good	38	60	100	100	100	2
419	Offspring	good	50	10	35	99	100	5
433	Phoenix	good	100	80	67	100	100	7
435	Plastic Man	good	50	63	23	100	100	5
487	Shadow King	good	75	12	27	100	100	7

Silver

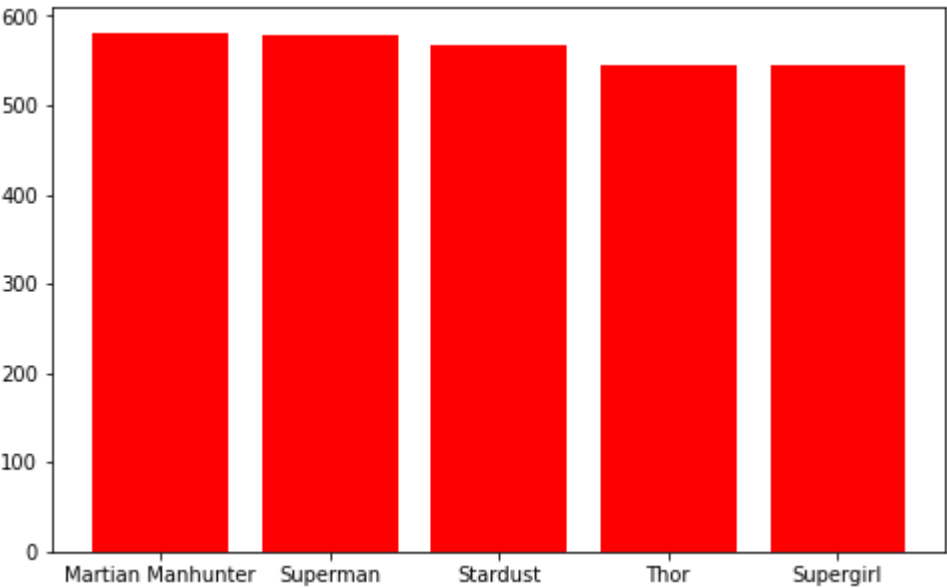
```
good_max_power=good.sort_values(by=['Total'],ascending=False)
```

511	Spawn	good	75	60	50	90	100	9
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```
good_max_power.head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
361	Martian Manhunter	good	100	100	96	100	100	85	561
537	Superman	good	100	100	100	100	94	85	579
525	Stardust	good	88	85	100	110	100	85	568
546	Thor	good	69	100	92	100	100	85	546
536	Supergirl	good	94	98	92	100	85	75	542

```
plt.figure(figsize=(8,5))
plt.bar(list(good_max_power['Name'])[0:5],list(good_max_power['Total'])[0:5],color='r')
plt.show()
```



```
bad=marvel[marvel['Alignment']=='bad']
```

```
bad.head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
4	Abomination	bad	63	80	53	90	55	95	346
5	Abraxas	bad	88	100	83	99	100	56	426
11	Air-Walker	bad	50	85	100	85	100	40	360
16	Amazo	bad	75	100	100	100	100	100	455
17	Ammo	bad	1	1	1	1	0	1	6

```
bad.sort_values(by=['Speed'],ascending=False).head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
<b>610</b>	Zoom	bad	50	10	100	28	72	28	28
<b>11</b>	Air-Walker	bad	50	85	100	85	100	40	40
<b>16</b>	Amazo	bad	75	100	100	100	100	100	100
<b>535</b>	Superboy-Prime	bad	94	100	100	100	100	85	85
<b>242</b>	General Zod	bad	94	100	96	100	94	95	95

```
bad.sort_values(by=['Intelligence'],ascending=False).head()
```

	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
<b>386</b>	Mister Mxyzptlk	bad	113	10	12	14	100	28	27
<b>338</b>	Lex Luthor	bad	100	10	12	14	10	28	17
<b>336</b>	Leader	bad	100	10	12	14	58	42	23
<b>122</b>	Brainiac	bad	100	28	63	90	60	75	41

```
bad.sort_values(by=['Total'],ascending=False).head()
```

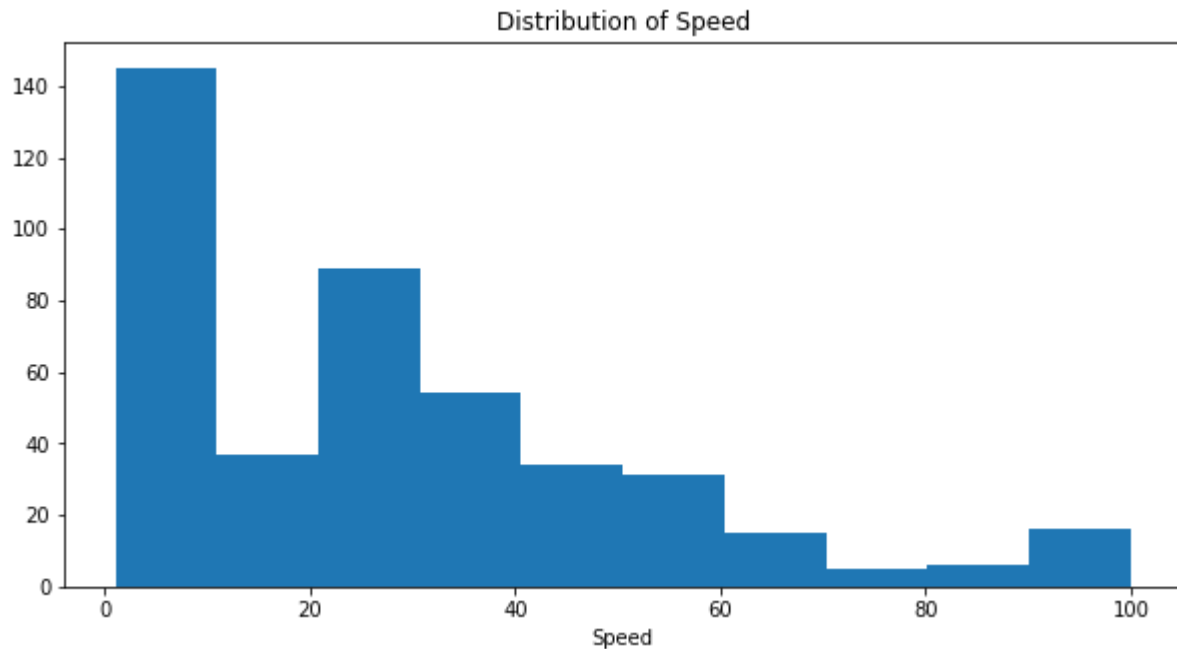
	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Total
<b>535</b>	Superboy-Prime	bad	94	100	100	100	100	85	85
<b>242</b>	General Zod	bad	94	100	96	100	94	95	95
<b>16</b>	Amazo	bad	75	100	100	100	100	100	100
<b>203</b>	Dormammu	bad	88	95	83	100	100	80	80

```
bad_max_power=bad.sort_values(by=['Total'],ascending=False)
```

```
bad_max_power.head()
```

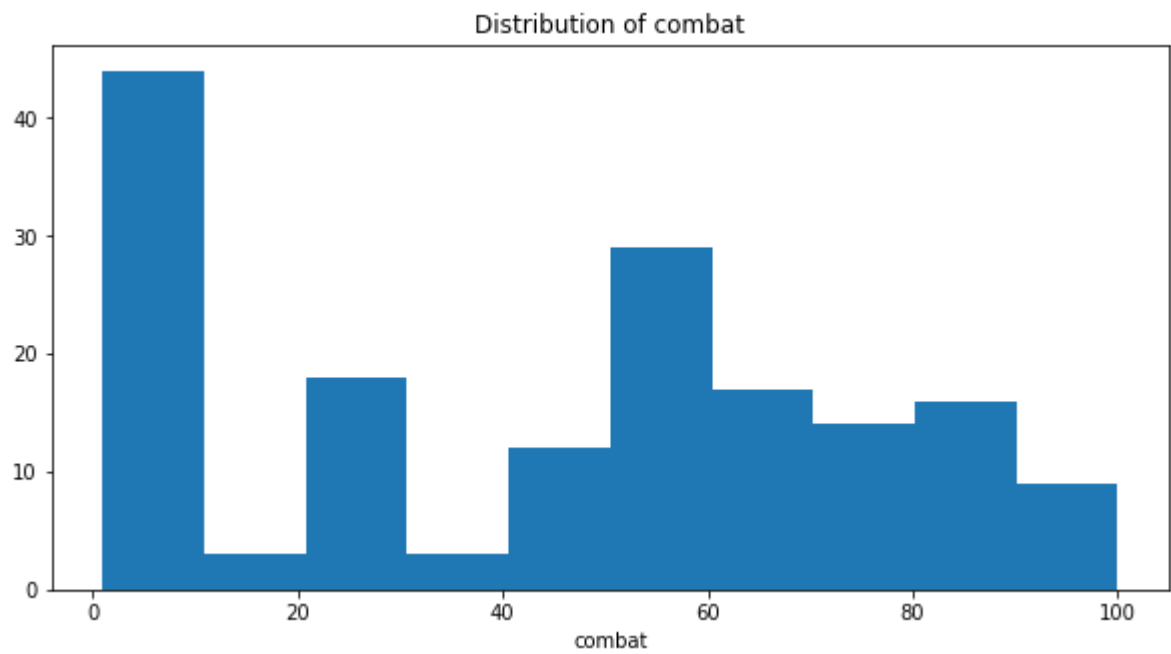
	Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Ti
535	Superboy-Prime	bad	94	100	100	100	100	85	

```
# Making a histogram for speed for good Superheroes
plt.figure(figsize=(10,5))
plt.hist(good['Speed'])
plt.title('Distribution of Speed')
plt.xlabel('Speed')
plt.show()
```



```
# Making a histogram for Combact for Supervillains
plt.figure(figsize=(10,5))
plt.hist(bad['Combat'])
plt.title('Distribution of combat')
plt.xlabel('combat')
plt.show()
```





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