Day 1 - SQL - Measure of Central Tendency

October 7, 2023

1 MEASURE OF CENTRAL TENDENCY

2 1 - Mean (Average)

```
[2]: age = [45,2,5,33,6,44,51,26,84,13,20,54,91,36,47,97,83,64,28]
```

```
[4]: import numpy as np
     np.mean(age)
```

```
[4]: 43.63157894736842
```

```
[5]: weights=[48,54,69,75,84,35,75]
```

```
[7]: np.mean(weights)
```

```
[7]: 62.857142857142854
```

```
[12]: import seaborn as sns
      df=sns.load_dataset('tips')
```

```
[13]: df.head()
```

```
[13]:    total_bill   tip     sex smoker  day    time  size
     0       16.99  1.01  Female     No  Sun  Dinner     2
     1       10.34  1.66    Male     No  Sun  Dinner     3
     2       21.01  3.50    Male     No  Sun  Dinner     3
     3       23.68  3.31    Male     No  Sun  Dinner     2
     4       24.59  3.61  Female     No  Sun  Dinner     4
```

```
[15]: np.mean(df['total_bill'])
```

```
[15]: 19.78594262295082
```

```
[16]: np.mean(df["tip"])
```

```
[16]: 2.99827868852459
```

3   2 - Median

```
[18]: np.median(age)
```

```
[18]: 44.0
```

```
[21]: np.median(df["total_bill"])
```

```
[21]: 17.795
```

```
[23]: np.median(df["tip"])
```

```
[23]: 2.9
```

4   3 - Mode

```
[19]: from scipy import stats
```

```
[20]: stats.mode(age)
```

```
/tmp/ipykernel_119/2474845003.py:1: FutureWarning: Unlike other reduction
functions (e.g. `skew`, `kurtosis`), the default behavior of `mode` typically
preserves the axis it acts along. In SciPy 1.11.0, this behavior will change:
the default value of `keepdims` will become False, the `axis` over which the
statistic is taken will be eliminated, and the value None will no longer be
accepted. Set `keepdims` to True or False to avoid this warning.
  stats.mode(age)
```

```
[20]: ModeResult(mode=array([2]), count=array([1]))
```

THANK YOU SO MUCH !!

YOURS VIRAT TIWARI :)