

Central Tendency Of Measures (Mean, Median, Mode)

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In [1]: #Exp no.:2
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In [2]: #Aim : To find Central Tendency of measures (Mean, Median, Mode)
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In [3]: #Name:Sahil A. Bankar  
#ROLL no:04  
#Sec:B  
#Subject:ET1  
#Date:31/07/2025
```

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In [4]: age=[22,21,20,20,21,21,22,22,22,21,22]
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In [5]: age
```

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Out[5]: [22, 21, 20, 20, 21, 21, 22, 22, 22, 21, 22]
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In [6]: import statistics
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In [7]: a=statistics.mean(age)
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In [8]: a
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Out[8]: 21.272727272727273
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In [9]: b=statistics.mode(age)
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In [11]: b
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```
Out[11]: 22
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In [13]: c=statistics.median(age)
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```
In [14]: c
```

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Out[14]: 21
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In [15]: import numpy as np  
import pandas as pd
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In [17]: x=np.array([1,6,7,2,8,5,4,1,8,5,7,5])
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In [18]: x
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Out[18]: array([1, 6, 7, 2, 8, 5, 4, 1, 8, 5, 7, 5])
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In [19]: print(np.mean(x))
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4.916666666666667
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In [20]: print(np.median(x))
```

5.0

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In [21]: from scipy import stats
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In [22]: print(stats.mode(x))
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ModeResult(mode=array([5]), count=array([3]))
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In [24]: sd=stats.tstd(x)
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In [26]: print("Standard Deviation:",sd)
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Standard Deviation: 2.5030284687057627
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In [28]: std_var=stats.tvar(x)
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In [29]: print("Standard Variance:",std_var)
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Standard Variance: 6.265151515151515
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Conclusion :

In this experiment, I have successfully calculated the mean, median, and mode of a given data array using Python libraries such as NumPy, SciPy, and statistics. The results demonstrate how different libraries offer efficient and reliable methods for computing central tendency measures.

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In [ ]:
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