

# How to Perform Univariate Analysis in Excel? Can you provide some examples?

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Performing univariate analysis in Excel involves analyzing a single variable or data set to gain insights and understanding of its characteristics. This can be done using various tools and functions available in Excel, such as creating charts, calculating summary statistics, and using data filters.

Some examples of univariate analysis in Excel could include creating a histogram to visualize the distribution of a numerical variable, calculating the mean and standard deviation of a data set, and using a pivot table to summarize categorical data. Additionally, Excel also offers various add-ins and advanced features, such as regression analysis, to further analyze and interpret data. By performing univariate analysis in Excel, one can effectively explore and understand the patterns and trends within a single variable, which can then inform decision-making and further analysis.

## **Perform Univariate Analysis in Excel (With Examples)**

**The term univariate analysis refers to the analysis of one variable. You can remember this by knowing that the prefix "uni" means "one."**

**The most common way to perform univariate analysis is to describe a variable using summary statistics. There are two popular types of summary statistics:**

**Measures of central tendency: Numbers that describe the center of a dataset. Examples include:**

**MeanMedianMode**

**: Numbers that describe the spread of values in a dataset. Examples include:**

## Standard Deviation Interquartile Range Range

The following example explains how to perform univariate analysis in Excel.

Example: Performing Univariate Analysis in Excel

Suppose we have the following dataset in Excel that shows the points, assists, and rebounds for 20 different basketball players:

	A	B	C	D	E	F	G	H
1	<b>Points</b>	<b>Assists</b>	<b>Rebounds</b>					
2	14	6	6					
3	16	7	6					
4	16	7	7					
5	19	5	8					
6	20	3	14					
7	11	8	1					
8	24	7	4					
9	28	8	4					
10	21	12	5					
11	23	7	4					
12	13	14	7					
13	9	11	8					
14	12	6	6					
15	14	3	3					
16	18	2	6					
17	18	2	6					
18	22	4	11					
19	24	5	16					
20	26	7	12					
21	29	5	10					
22								
23								
24								
25								
26								
27								

Now suppose that we'd like to perform univariate analysis on the values in the "Points" column.

We can use the following formulas to calculate various summary statistics for the "Points" variable:

	A	B	C	D	E	F	G	H
1	Points	Assists	Rebounds				Value	Formula Used
2	14	6	6			Mean	18.85	=AVERAGE(A2:A21)
3	16	7	6			Median	18.5	=MEDIAN(A2:A21)
4	16	7	7			Mode	14	=MODE(A2:A21)
5	19	5	8					
6	20	3	14			Standard Deviation	5.75	=STDEV(A2:A21)
7	11	8	1			Interquartile Range	9.25	=QUARTILE(A2:A21, 3) - QUARTILE(A2:A21, 1)
8	24	7	4			Range	20	=MAX(A2:A21) - MIN(A2:A21)
9	28	8	4					
10	21	12	5					
11	23	7	4					
12	13	14	7					
13	9	11	8					
14	12	6	6					
15	14	3	3					
16	18	2	6					
17	18	2	6					
18	22	4	11					
19	24	5	16					
20	26	7	12					
21	29	5	10					
22								
23								
24								
25								
26								

Here's how to interpret these values for the "Points" variable:

**Mean = 18.85.** This represents the average value. **Median = 18.5** This represents the "middle" value. **Mode = 14.** This represents the most frequently occurring value. **Standard Deviation = 5.75.** This represents the

**average spread of values from the mean. Interquartile Range = 9.25. This represents the spread of the middle 50% of values. Range = 20. This represents the difference between the largest and smallest value.**

**By knowing just these summary statistics, we can know a great deal about the distribution of values in the dataset.**

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