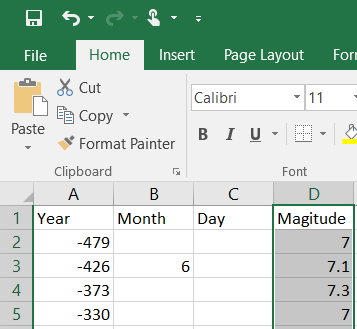
Chapter 3: Displaying and Summarizing Quantitative Data

Part I: Histogram and Stem-and-Leaf plot

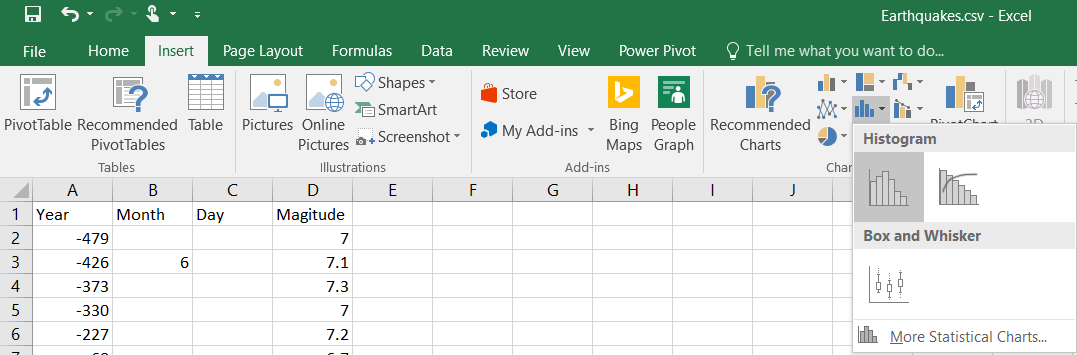
**Earthquakes Example:**

Source: NOAA (National Oceanic and Atmospheric Administration.)

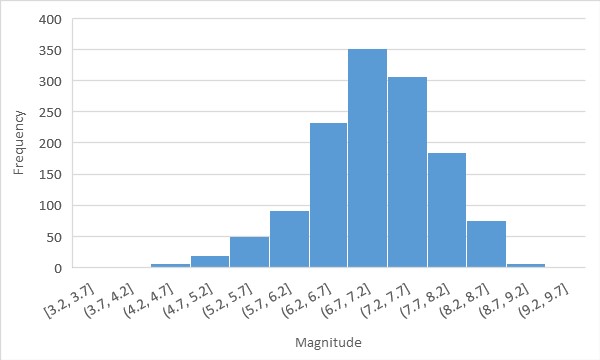
1. **Histogram:**
2. Open the data file (Earthquakes.csv). In this file, there are four variables which are year, month, day, and magnitude.
3. Select the range of the magnitude variable.



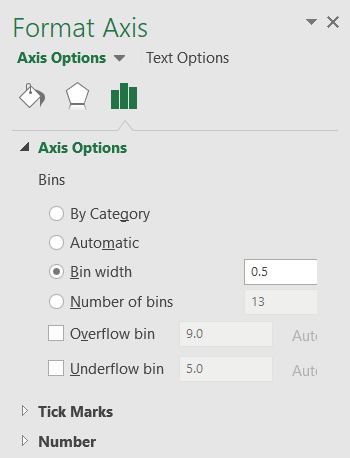
1. Select **Insert** tab **Insert Statistic Cart**  **Histogram**.



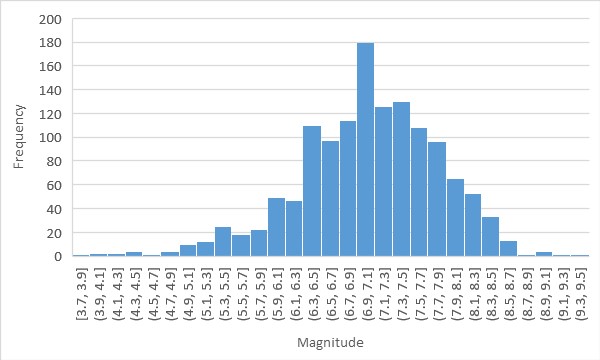
1. The result is the histogram.



1. To change the bins width, double click on the **X axis**, the **Format Axis** will show on the right of the screen; select **Bin Width** and enter the appropriate width. (Let’s try 0.2)



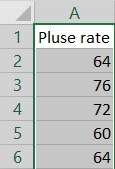
1. The result is



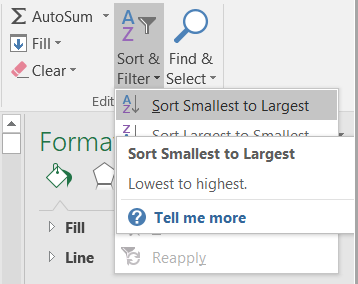
1. **Dot plot:**

**Pulse Rate Example:**

1. Open the data file (Pulse Rate.csv). In this file, there is one variables which is pulse rate. Select the range of the pulse rate variable.



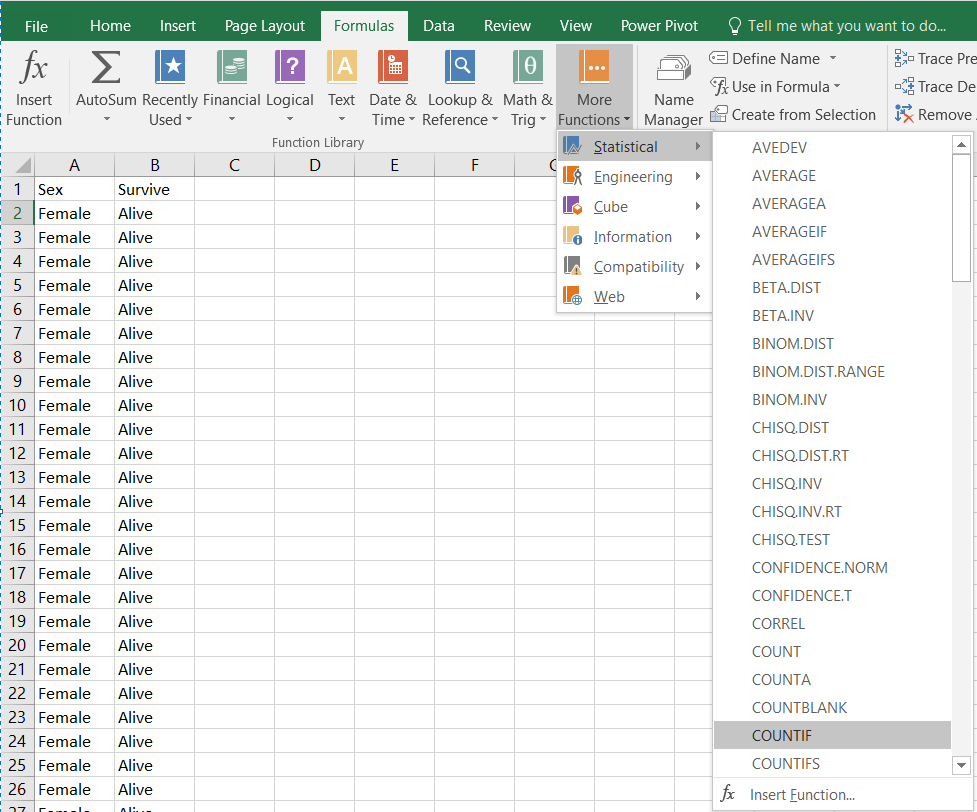
1. Select **Home** tab **Sort & Filter**  **Sort Smallest to Largest**. The observations will sort from smallest to largest.

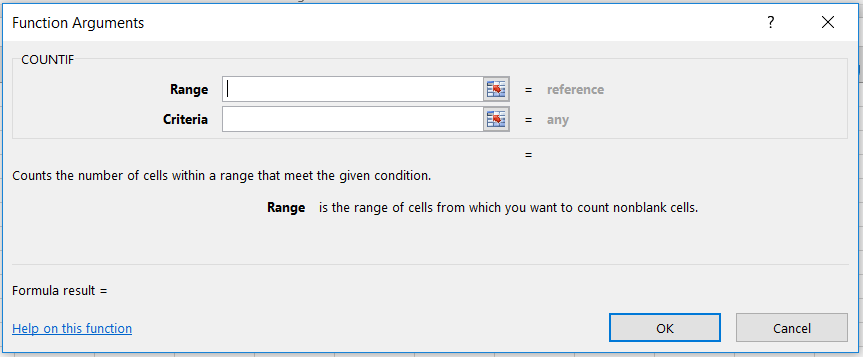


1. Create a new variable to count how many time the value are repeated. Select a cell and use the function **COUNTIF**; we can write as “=COUNTIF”.



or select it from **Formulas** tab **More Functions** **Statistical** **COUNTIF**.



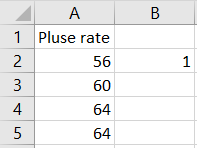


**range**: The range of cells to count (the range of the dataset).

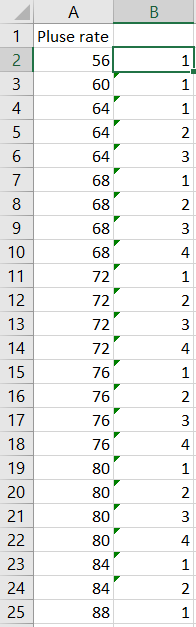
**criteria**: The criteria that controls with cells should be counted.

Make sure to type the dollar sign ($) like the following formula

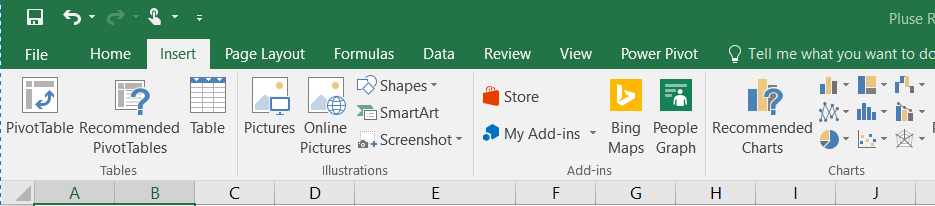


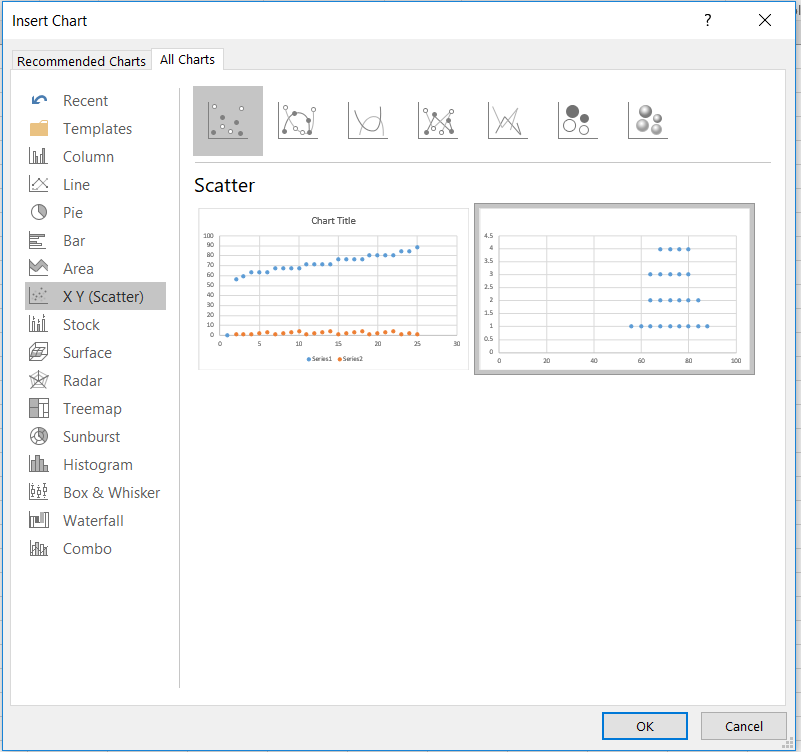


1. Copy and paste the formula in the next cells.



1. Select the two columns, then select **Insert** tab **Recommended Charts**, **Insert Chart** will appear, then select **All Charts** **X Y (Scatter)**, then click **OK**.





1. The results is a dot plot.

