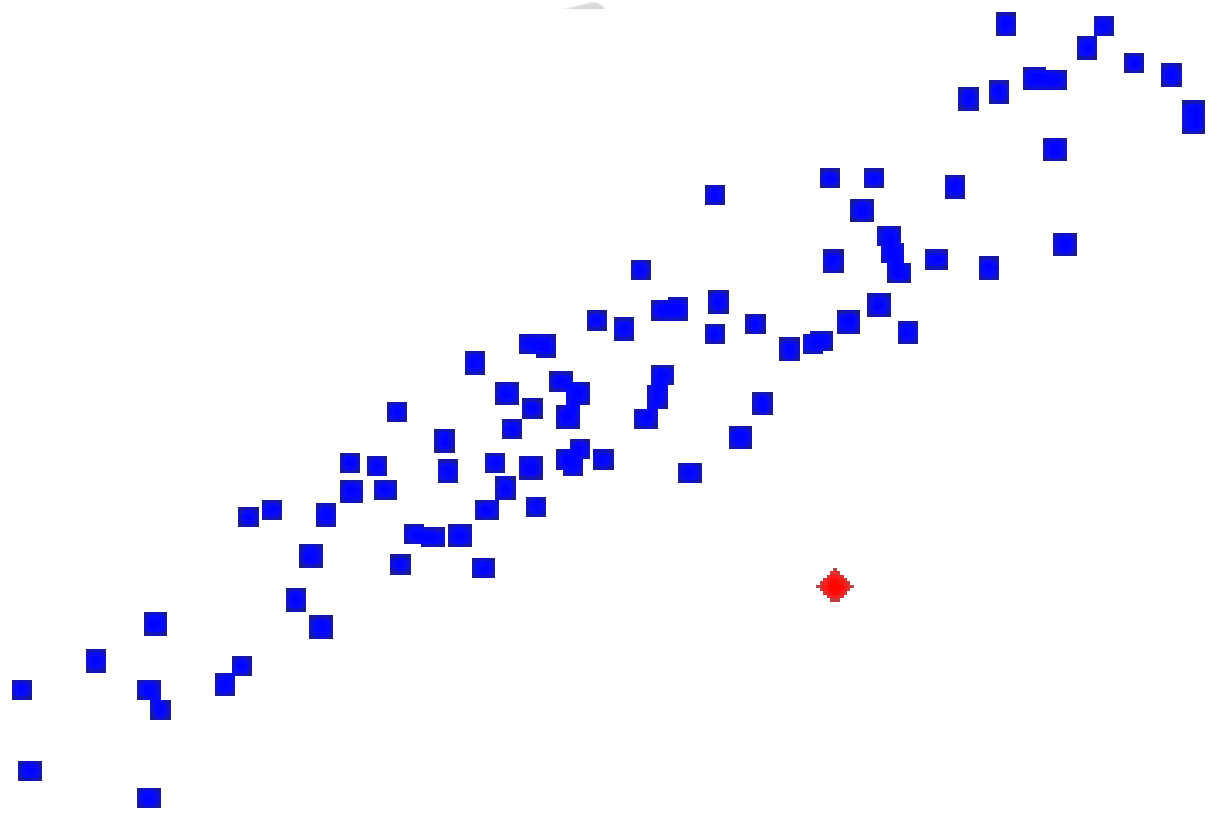
Descriptive Statistics

In the previous video

Without Outlier	With Outlier
4, 4, 5, 5, 5, 5, 6, 6, 6, 7, 7	4, 4, 5, 5, 5, 5, 6, 6, 6, 7, 7,300
Mean = 5.45	Mean = 30.00
Mode = 5.00	Mode = 5.00

In this video

- How to summarize data when we have outliers ?



Median

It is nothing but the absolute central value of the data.

1, 3, 3, **6**, 7, 8, 9

Median = 6

Steps to calculate median

- So let's say we have a series of numbers [2,4,5,7,7,4,2,7,8,9]
- Arrange the series in ascending order – so we have 2,2,4,4,5,7,7,7,8,9
- Count the number of elements in the dataset – so in this case we have 10
- If the number of elements in the data set is odd, the middle most element is the median i.e. if we have n elements, the median would be th element in the sorted series.
- If the number of elements in the data is even, then the median would be the average of two central elements. So the median would be the average of th elements.

Choose the measure of central tendency

Mean

- Not many outliers

Without Outlier

4, 4, 5, 5, 5, 5, 6, 6, 6, 7, 7

Mean = 5.45

Median = 5.00

Mode = 5.00

Median

- Data Prone to outliers

With Outlier

4, 4, 5, 5, 5, 5, 6, 6, 6, 7, 7,300

Mean = 30.00

Median = 5.50

Mode = 5.00