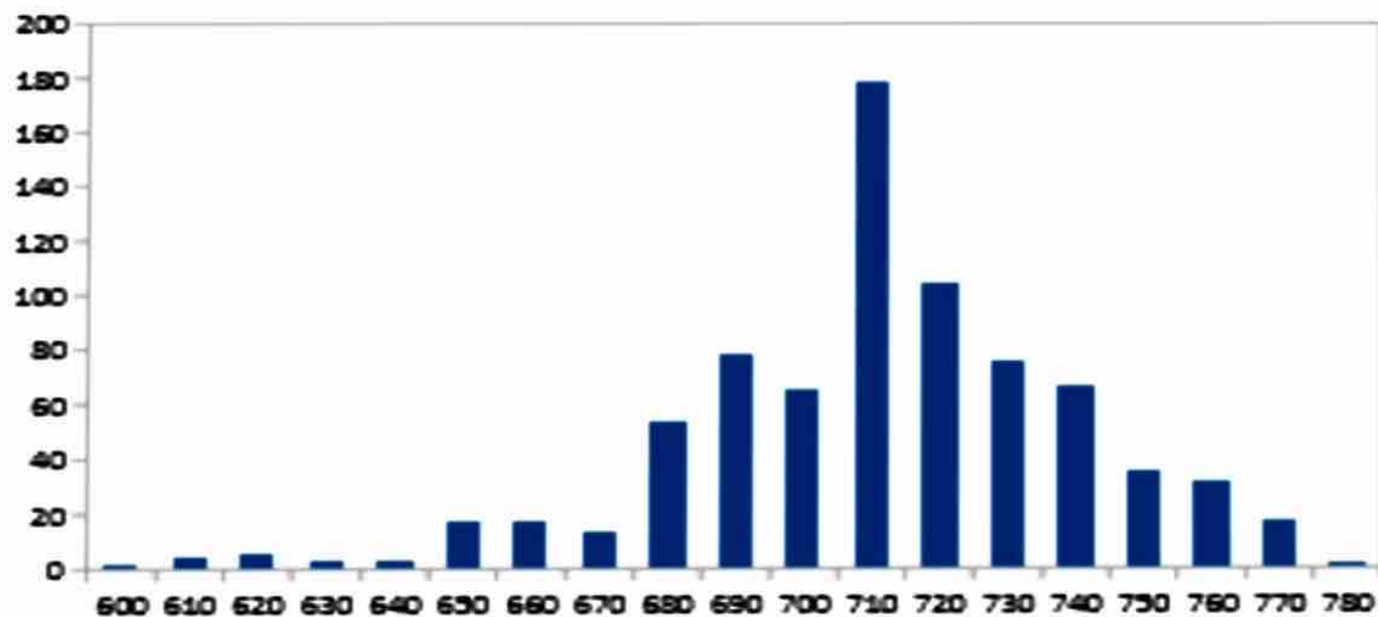


GMAT Scores of an MBA Class

610	730	590	610	.	.	.	680	630
640	680	540	660	.	.	.	610	540
690	610	520	640	.	.	.	720	680
610	650	660	530	.	.	.	600	730
710	600	760	690	.	.	.	500	720
610	650	660	710	.	.	.	480	600
630	610	680	730	.	.	.	700	690
530	550	730	690	.	.	.	670	540
630	720	610	710	.	.	.	600	600
690	600	730	540	.	.	.	560	770

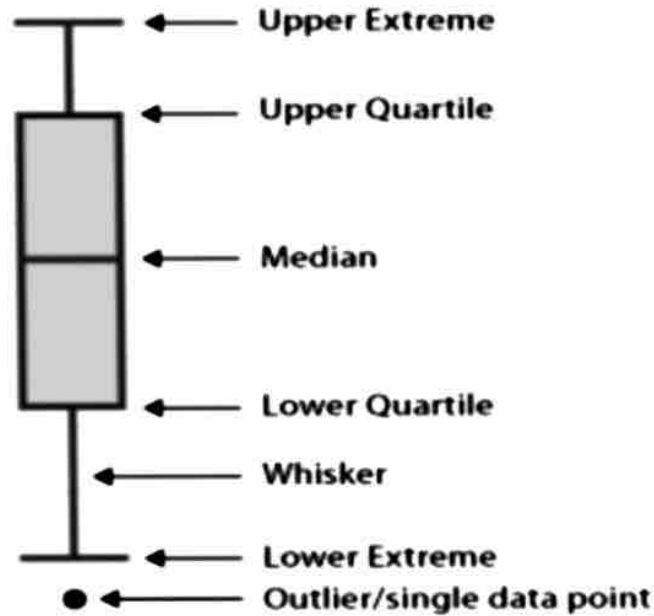
Pictorial summary of data: A bar chart



Graphical Techniques – Box Plot

Range(IQR): The middle half of a data set falls within the inter-quartile range

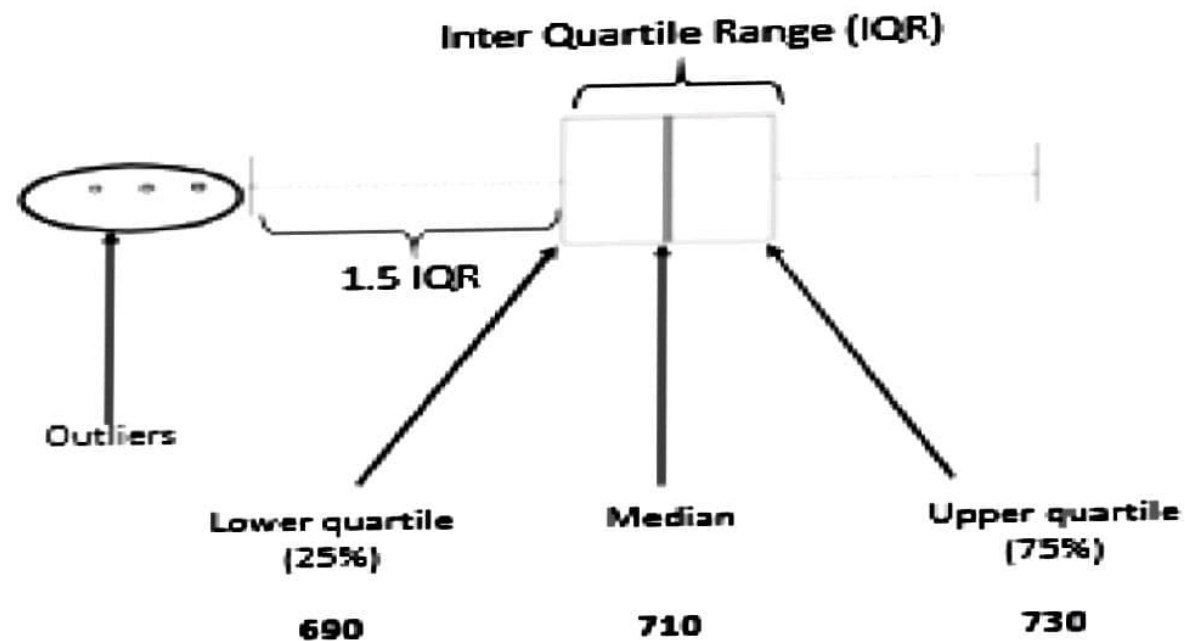
Inter-quartile



Box Plot : This graph shows the distribution of data by dividing the data into four groups with the same number of data points in each group. The box contains the middle 50% of the data points and each of the two whiskers contain 25% of the data points. It displays two common measures of the variability or spread in a data set

Range : It is represented on a box plot by the distance between the smallest value and the largest value, including any outliers. If you ignore outliers, the range is illustrated by the distance between the opposite ends of the whiskers

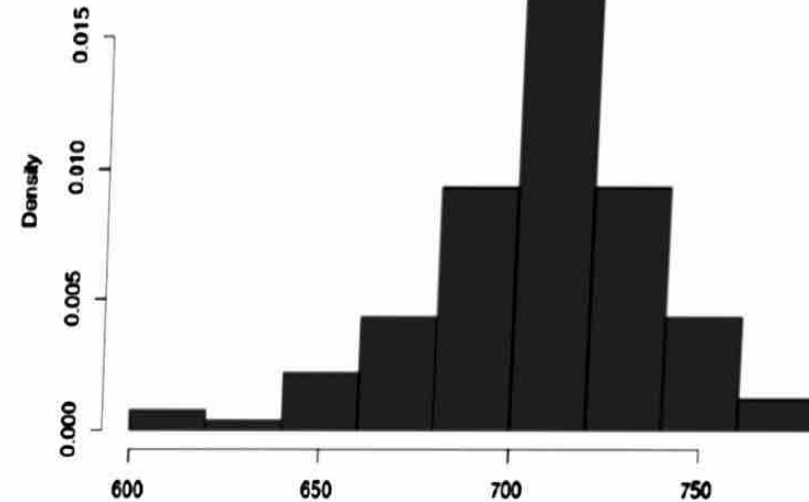
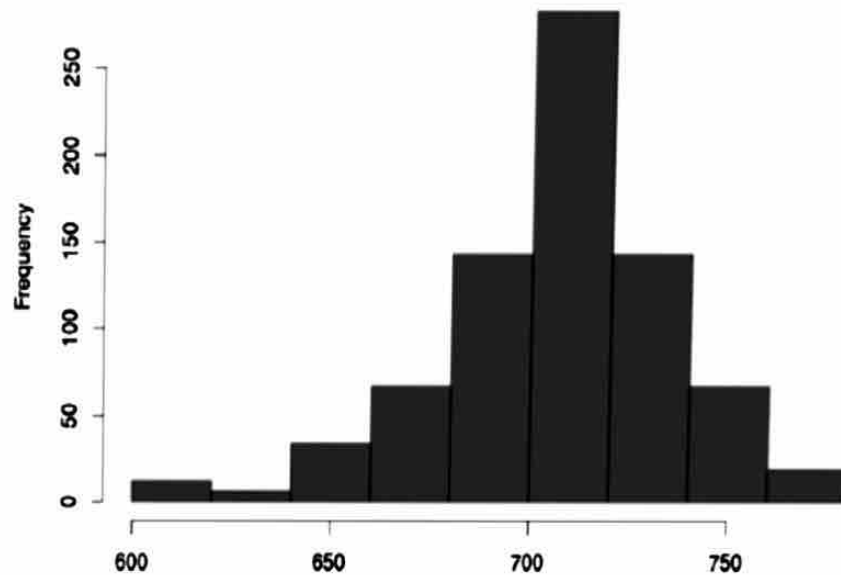
Boxplot



A boxplot displays the prominent quartiles of the data along with outliers

Graphical Techniques – Histogram

A Histogram Represents the frequency distribution, i.e., how many observations take the value within a certain interval.

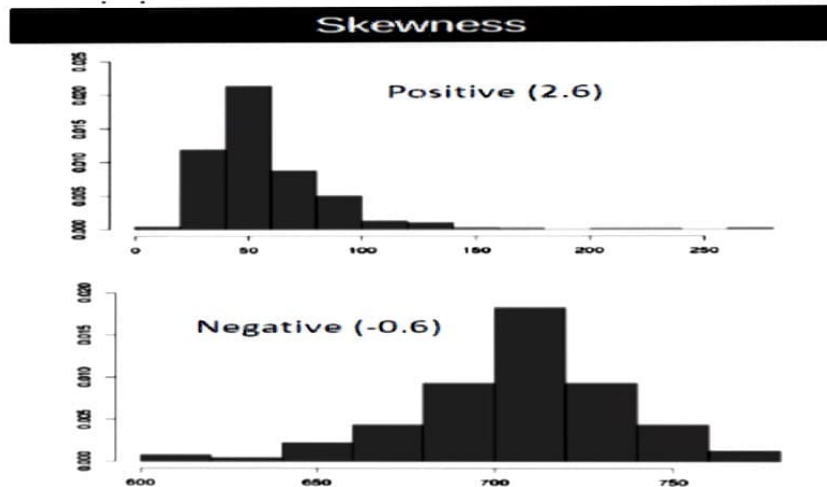


Skewness & Kurtosis

Third and Fourth moments

Skewness

- A measure of asymmetry in the distribution
- Mathematically it is given by $E[(x-\mu/\sigma)]^3$
- Negative skewness implies mass of the distribution is concentrated on the



Kurtosis

- A measure of the “Peakedness” of the distribution
- Mathematically it is given by $E[(x-\mu/\sigma)]^4 - 3$
- For Symmetric distributions, negative kurtosis implies wider peak and thinner tails

