Unimodal Empirical Formula: mean – mode = 3(mean - median)

Sample Variance:

A picture containing text, clock, gauge

Description automatically generated

Population Variance:

A picture containing clock, watch

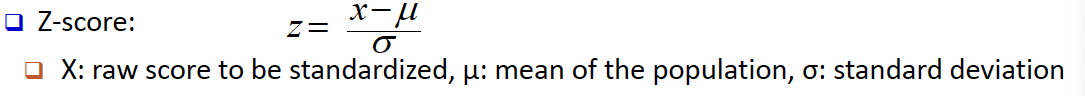
Description automatically generated

Chi-square test:

Table

Description automatically generated

z-score normalization



min-max normalization

Timeline

Description automatically generated with medium confidence

Graphical user interface, text, email

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

*Drill down on Department from \* to College-level*

*Drill down on Time dimension from \* to year-level*

*Dice on (i.e., select) college = ”Engineering” and Year = ”2007”*

*Drill down on Time to season and slice on season = ”Spring”*

*Drill down on Department to the department-level*

*Drill down on Student dimension to student name (or ID)*

*Select top 10 GPA values, and print the corresponding student names*

(i) algebraic: average, variance

(ii) holistic: median, Q1, rank

BoxPlot

A five-number summary is a detailed descriptive statistics of a variable.

1.minimum value 2.Quartile 1 3.Median(quartile 2) 4.Quartile 3 5.Maximum value

Boxplot is the diagramatical visual presentation of the five number summary of the data.

The boxplot can also give us the information regarding:

1.OUTLIERS 2.SYMMTERY of the data(left skewed,symmetric,right skewed)

Two distributions can have same boxplots:

if they have same five number summary i.e

1.minimum value 2.Quartile 1 3.Median(quartile 2) 4.Quartile 3 5.Maximum value

Describe what quantile plots are.

Describe what quantile-quantile plots are.

How is a quantile-quantile plot di erent from a quantile plot? Clearly explain.

Quantile Plot

The quantile is the value such that some fixed proprotion of a distribution is less than equal to that.

quantile -quantile plots are the graphical method for determining whether the two samples came from same population or not.

Displays all of the data (allowing the user to assess both the overall behavior and

unusual occurrences)

Graphs the quantiles of one univariate distribution against the corresponding

quantiles of another

How many cuboids are needed to preprocess all?

Text

Description automatically generated