

## SALT Software Reference ( Webassign)



Open Salt with the given Data.

To find mean, standard deviation, 5-number summary

(<https://www.webassign.net/csalt/#/toolset/descriptive-statistics>)

Go to **Descriptive Statistics** and select the needed Numerical Statistics (like mean, standard deviation Q1 etc.) – **Refer to Image-1 if needed**

To graph Histogram/Box plot/Scatter plot/Pie chart etc.

(<https://www.webassign.net/csalt/#/toolset/charts-and-graphs>)

Go to **Charts & Graphs**, select the required plot. Box plot will give you the 5-number summary. If you do scatter plot, you can select the regression line and also find the slope/intercept/correlation coefficient. – **Refer to Image-2, and Image-3**

To find Critical value/x-value or binomial probability

(<https://www.webassign.net/csalt/#/toolset/distributions>)

Go to **Distribution Calculators** and select the appropriate distribution (Normal/T/Chi Square/Binomial).

To find **Critical Z** (select **Normal Distribution** input **mean = 0, standard deviation = 1** and input the appropriate area under **probability** in the box above Z-score label and select **right tail**)

To find **Critical t** (select **T Distribution** input **degree of freedom (N-1)** and the appropriate area under **probability** in the box above Shaded Area label and select **right tail**)

To find **Critical  $\chi^2$**  (select **Chi Square Distribution** input **degree of freedom (N-1)** and the appropriate area under **probability** in the box above Shaded Area label and select **right tail**)

To find **Binomial Probability** (select **Binomial Distribution** input **Number of Fixed Trials, Probability of Success**, and under **Probability** input the appropriate x-value in the box and select the appropriate tail **right tail/left tail/between etc.**)

Refer to Image-4, Image-5 and Image-6 if needed

To find Confidence Interval/ run Hypothesis Test

(<https://www.webassign.net/csalt/#/toolset/inferential-statistics>)

Go to **Inferential Statistics**,

To find **Confidence Interval** (select appropriate **Procedure Selection (One Sample t, One sample Proportion etc.)** input **Sample mean, Sample standard deviation, Sample size** and select **Confidence Interval**, type in the correct **Confidence interval** in the box and click **Generate Results**.

To run **Hypothesis Test** (select appropriate **Procedure Selection (One Sample t, One sample Proportion etc.)** input **Sample mean, Sample standard deviation, Sample size**, select **Hypothesis Test** and input the **Null** and **Alternative Hypothesis** and click **Generate Results**.

Refer to Image-7 and Image-8 if needed

To find Correlation Coefficient / Regression Equation/p-value

(<https://www.webassign.net/csalt/#/toolset/regression>)

Go to **Regression**,

Under Settings, select the **Explanatory Variable** (x-axis) and the **Response Variable** (y-axis) and select **Regression line and under Model's Summary Table** you will find the needed equation, correlation coefficient,  $R^2$ , p-value etc.

You can also obtain the equation of the regression line and correlation coefficient, by accessing **Charts & Graphs** and selecting regression line under **Scatter Plot**

Refer to Image-9 and Image-3 if needed

Image-1

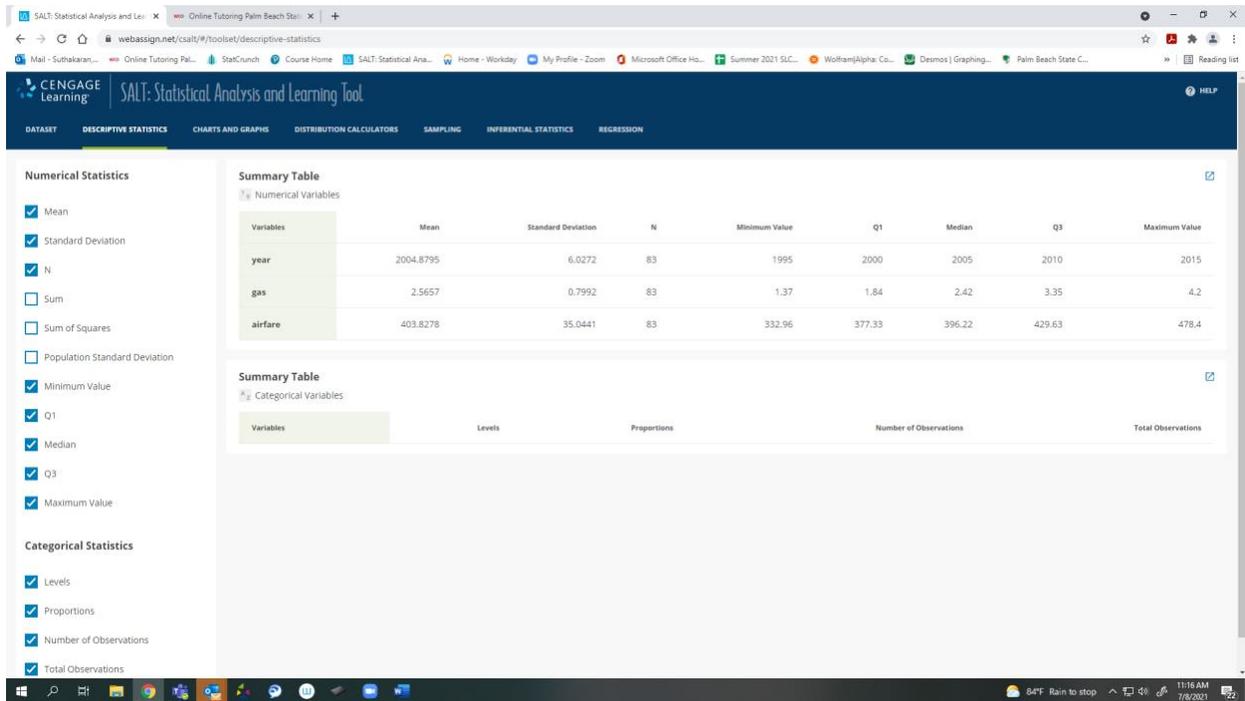


Image-2

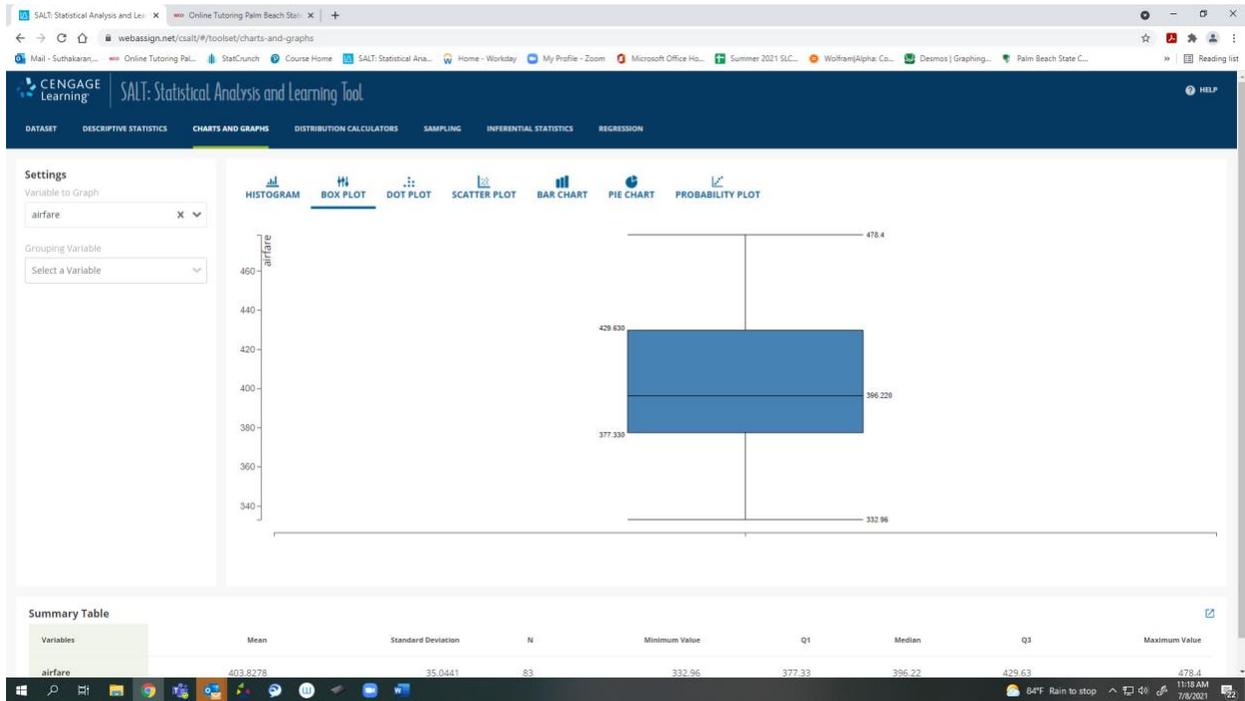


Image-3

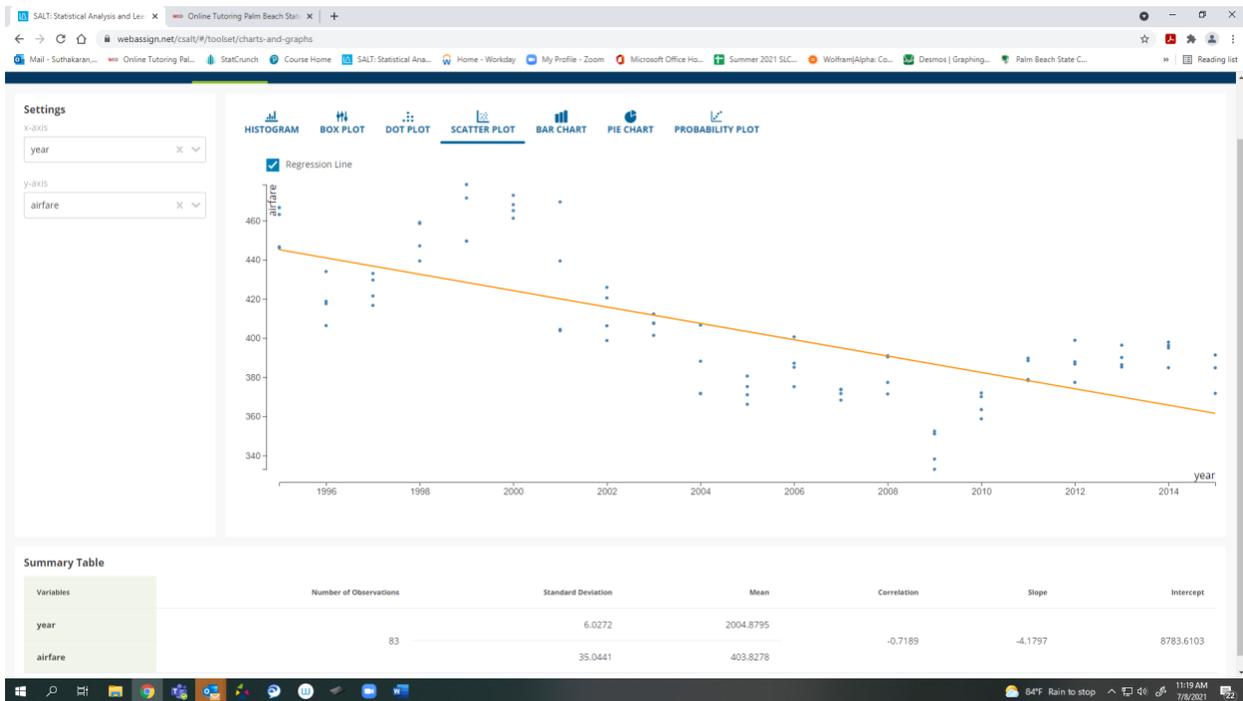


Image-4

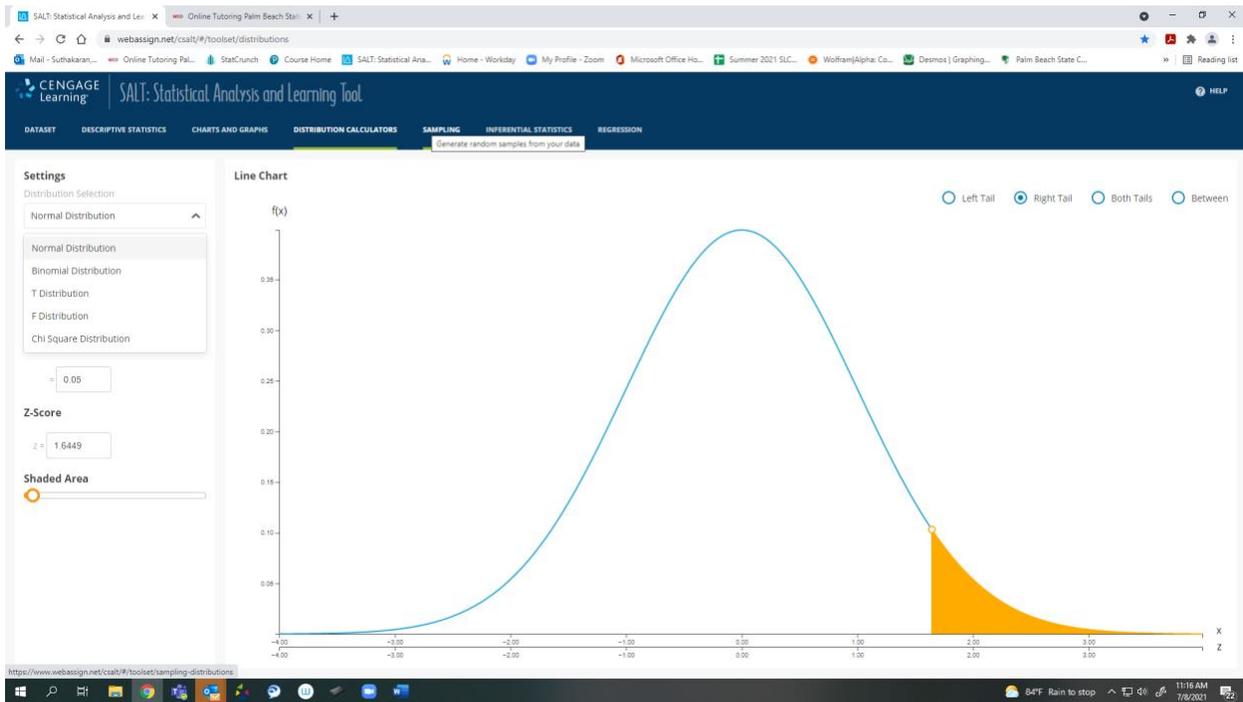


Image-5

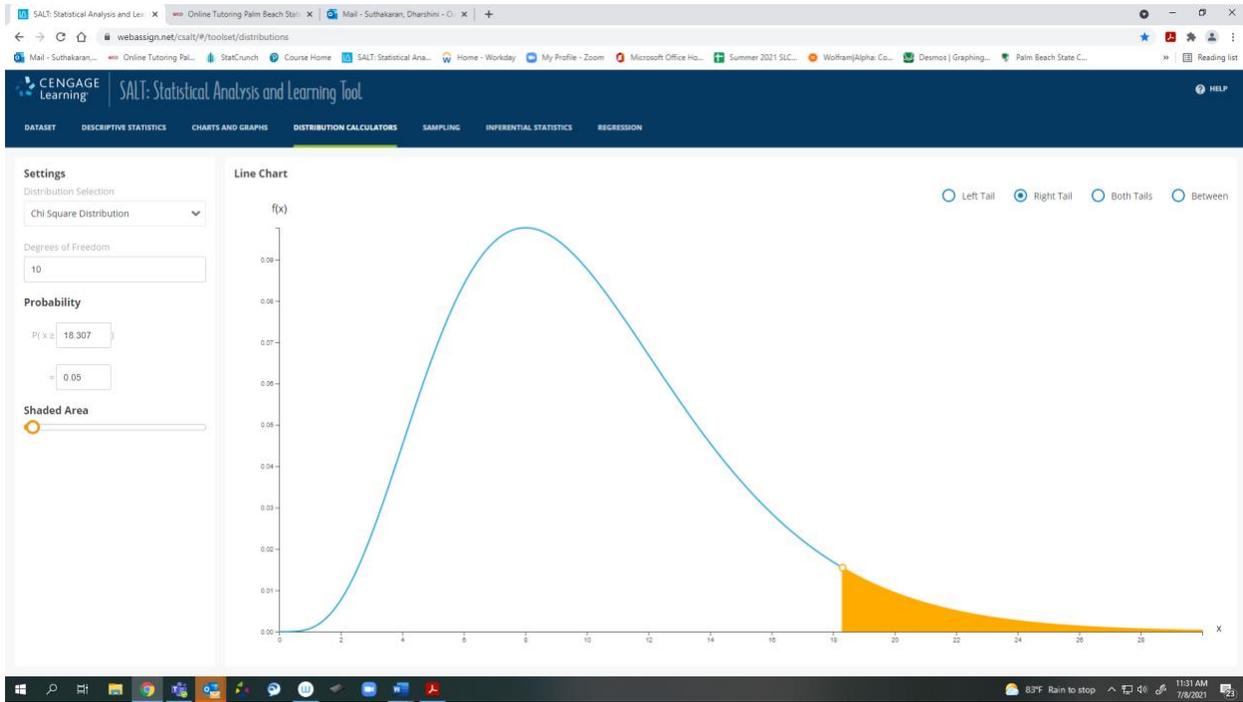


Image-6

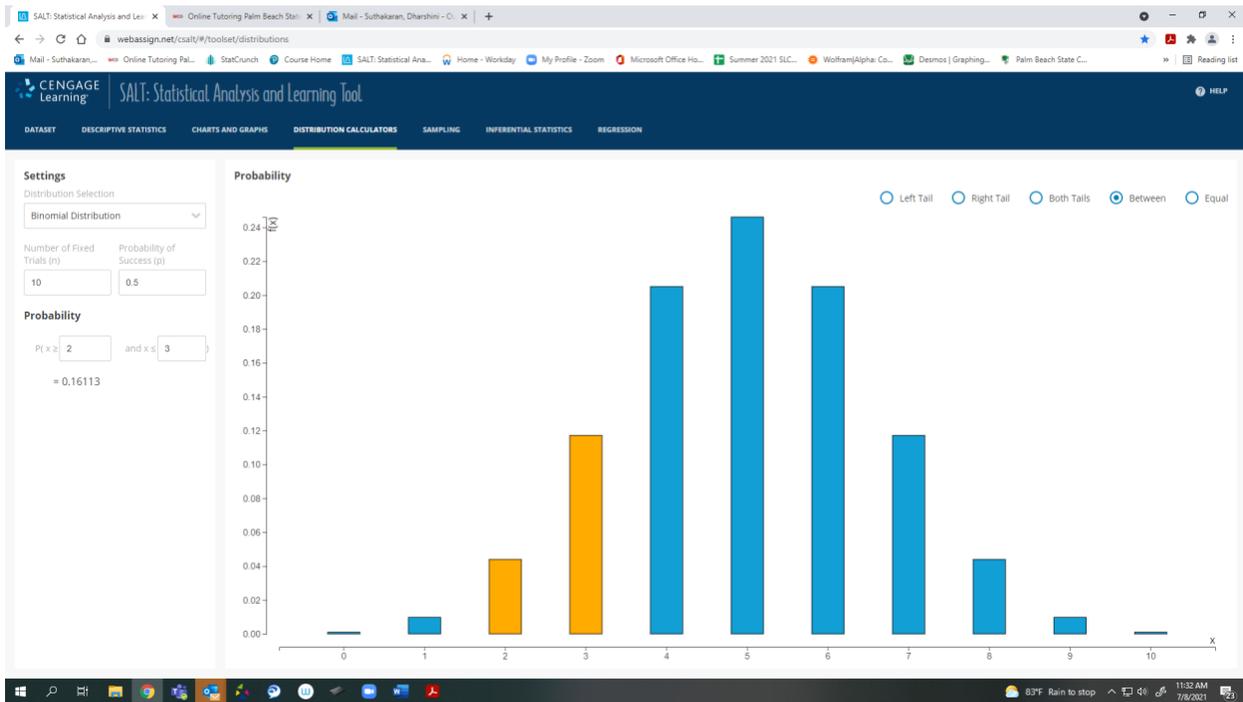


Image-7

The screenshot shows the SALT: Statistical Analysis and Learning Tool interface. The main content area displays a "One Sample t Confidence Interval Summary" for a mean of population. The summary includes a table with the following data:

n	Mean	Standard Deviation	Standard Error	DF	Lower Limit	Upper Limit
10	135	2.31	0.730486	9	133.347526	136.652474

The settings on the left indicate a procedure selection of "One Sample t", a sample mean of 135, a sample standard deviation of 2.31, and a sample size of 10. The confidence interval is set to 95%.

Image-8

The screenshot shows the SALT: Statistical Analysis and Learning Tool interface. The main content area displays a "One Sample t Hypothesis Test Summary" for a mean of population. The summary includes the following information:

Null Hypothesis:  $H_0: \mu = 0$   
Alternative Hypothesis:  $H_1: \mu \neq 0$

n	Mean	Standard Deviation	Standard Error	DF	T-Statistic	P-Value
10	135	2.31	0.730486	9	184.808435	< 0.00001

The settings on the left indicate a procedure selection of "One Sample t", a hypothesized mean of 0, and an alternative hypothesis of "Not equal".

# Image-9

