Statistical Analysis

Finding the Middle

Mean, Median, and Mode help you compare data. Below, list the mean, median, and mode of the clicks in the provided data.

AdWords Ad

Mean: 60.38

Median: 60

Mode: 78

Finding the Middle

Mean, Median, and Mode help you compare data. Below, list the mean, median, and mode of the clicks in the provided data.

Facebook Ad

Mean: 44.05

Median: 43

Mode: 36

Finding the Middle

Mean, Median, and Mode help you compare data. Below, list the mean, median, and mode of the conversions in the provided data.

AdWords Ad

Mean: 5.98

Median: 6

Mode: 5

Finding the Middle

Mean, Median, and Mode help you compare data. Below, list the mean, median, and mode of the conversions in the provided data.

Facebook Ad

Mean: 11.74

Median: 12

Mode: 3

Standard Deviation

Determining variance in data helps you know data is spread, the smaller the variance, the more reliable the data. Below, enter the standard deviation of the provided data.

AdWords Ad

Standard Deviation of Clicks: 14.37

Standard Deviation of Conversions: 1.63

Standard Deviation

Determining variance in data helps you know data is spread, the smaller the variance, the more reliable the data. Below, enter the standard deviation of the provided data.

Facebook Ad

Standard Deviation of Clicks: 14.37

Standard Deviation of Conversions: 1.63

Frequency and Contingency Tables

Understanding how often something happens is important to understanding trends and patterns in your data. Create and insert a contingency table generated from your data.

	Clicks	Conversions
Facebook Ad	16078	4286
AdWord Ad	22040	2183

Scatter Plot

Understanding the relationships between data is important to understanding trends and patterns. Create and insert a scatter plot generated from your data. Then, include the input the correlation coefficient as well.

Correlation coefficient: 0.45

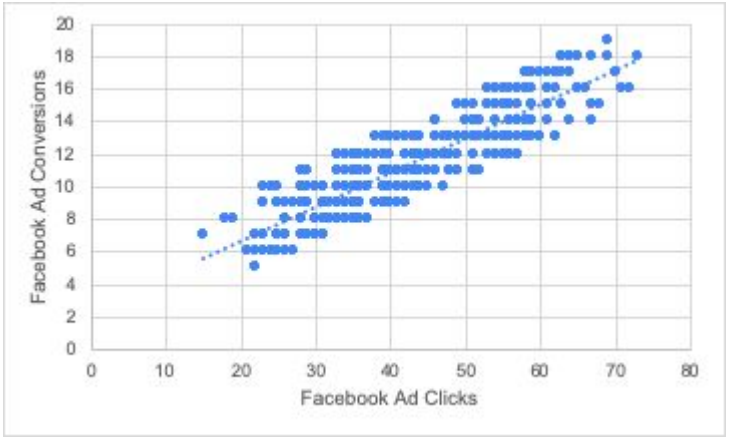
Scatter Plot of your data: AdWord Ad

Scatter Plot

Understanding the relationships between data is important to understanding trends and patterns. Create and insert a scatter plot generated from your data. Then, include the input the correlation coefficient as well.

Correlation coefficient: 0.87

Scatter Plot of your data: Facebook Ad

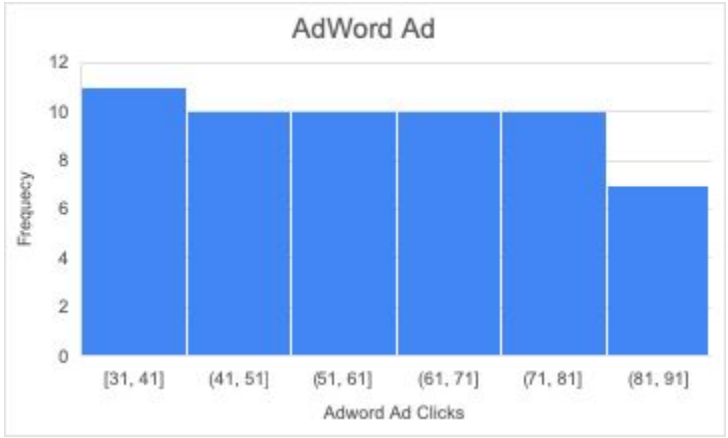


End of Section 1

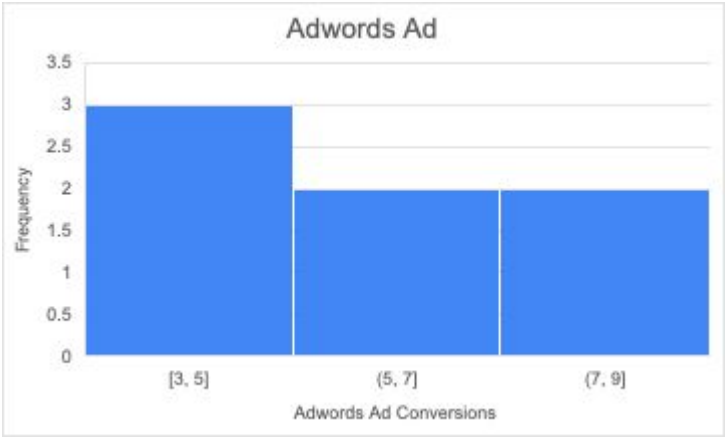
Sample Type: Adwords Ad

It's important to understand the sample you're using in your analysis. Fill in the information below about the sample you have received:

Histogram of your clicks data:



Histogram of conversions data:



Sample Type

It's important to understand the sample you're using in your analysis. Fill in the information below about the sample you have received:

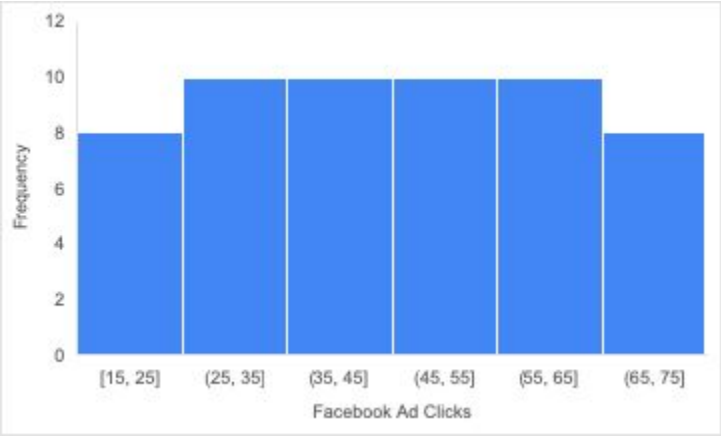
Does the clicks data have a normal distribution? The clicks data seem to have a normal distribution only that it is skewed to the left.

Does the conversions data have a normal distribution? The conversion data also seems to have a normal distribution and also skewed to the left.

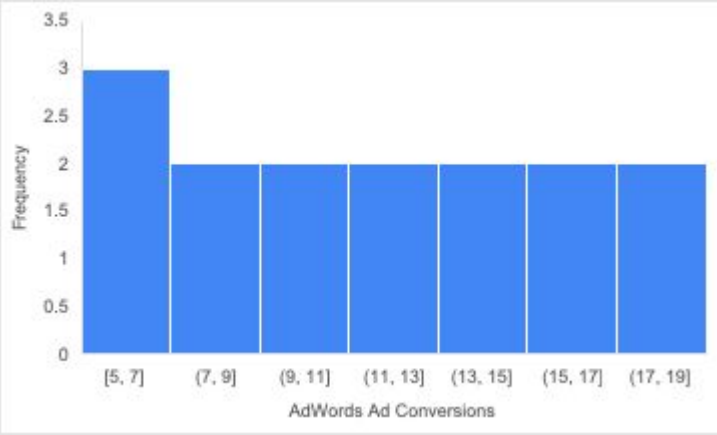
Sample Type: Facebook Ad

It's important to understand the sample you're using in your analysis. Fill in the information below about the sample you have received:

Histogram of your clicks data:



Histogram of conversions data:



Variable Types

Determining the types of variables your working with is an important skill. Below, list the variables from your data that are:

Quantitative:

Continuous: Cost per AdWords Ad, Adwords click through rate, Adwords conversion rate, Adwords cost per click

Discrete: Adwords Clicks, Adwords views and Adwords Conversions

End of Section 2

Question and Hypothesis

The question you hope to answer and your hypothesized answer are necessary to complete an analysis. Answer the following questions

There is a significant difference between the number of conversions on the Facebook platform versus the AdWords platform.

Facebook Ad has more number of conversions than AdWord Ads.

Question and Hypothesis

The question you hope to answer and your hypothesized answer are necessary to complete an analysis. Answer the following questions

What is your independent variable?
Platforms(facebook,AdWord)

What is your dependent variable? Number of conversions

Running a Test

With your question and hypothesis ready, run the test on the two sets of data. Fill in the information below.

Mean number of Facebook conversions: 5.98

Mean number of Adword conversions: 11.74

p-Value: 4.5597E-146

Hypothesis

After running the test, was your hypothesis proven correct?

Do your findings support a null or an alternative hypothesis? xx

Based on the given alpha, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted.

My hypothesis is correct.

End of Section 3

Determining a Model

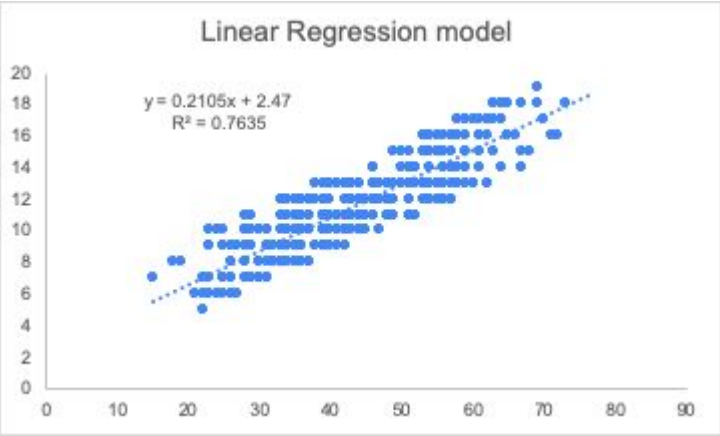
Based off what you know so far, you'll need to determine if your data meets the assumptions for a chosen model. Including:

To know the number of Facebook Ad conversions that can be expected given a certain number of Facebook clicks; linear regression model will be the most suitable model to use given the fact that Facebook conversions is the independent variable and the number of facebook clicks is the dependent variable.

Also, the data satisfies all assumptions of regression analysis.

Modeling

Finally, include a visualization of your complete model.



End of Section 4

Final Insights

Now, knowing what you do about the results of your test, what are the final insights that you would share with your client? What did you learn and what would you recommend? Is there anything you would do differently next time?

Enter your insights here: There is a strong positive correlation between Facebook conversions and Facebook clicks, more clicks resulted into more conversions.

Also there is a significant difference between between Facebook Ad and AdWords Ad, thereby rejecting the null hypothesis and accepting the alternative hypothesis.

In conclusion, i will recommend running advertisement more on Facebook than AdWords.