

Facebook Dataset

Data Collection

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.

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.

Mean: 11.74

Median: 12.00

Mode: 13.00

Standard Deviation

Determining variance in data helps you why this is helpful. Below, enter the standard deviation of the provided data.

Standard Deviation of Clicks: 12.14

Standard Deviation of Conversions: 2.92

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.

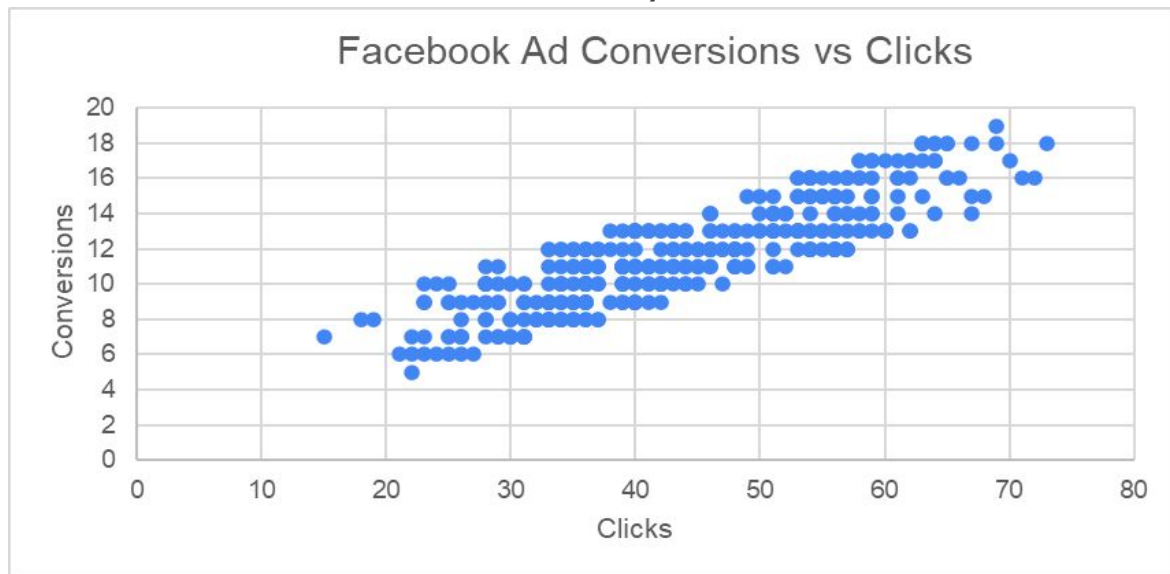
Number of Conversions:	1 to 5	6 to 10	11 to 15	16+
Number of Occurences:	1	128	189	47

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:

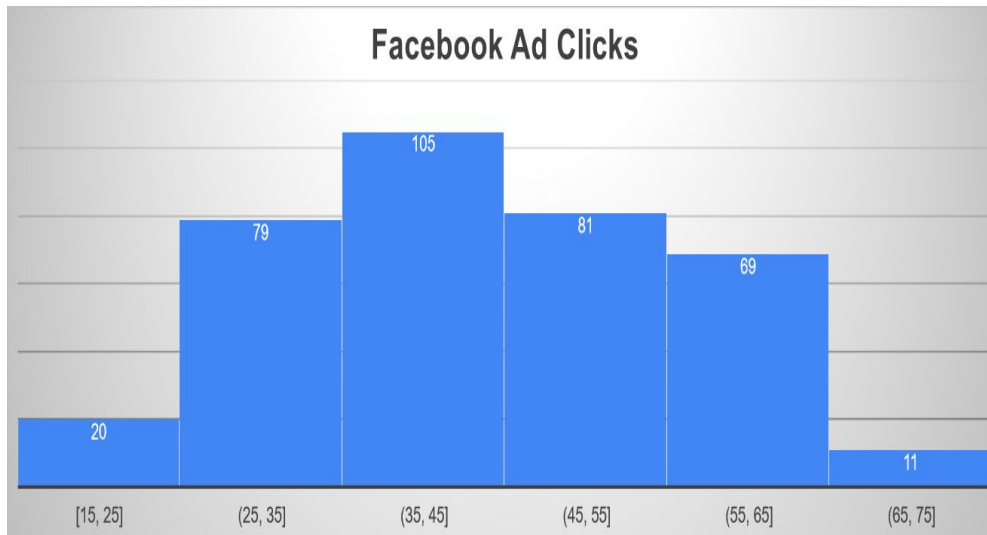


End of Section 1

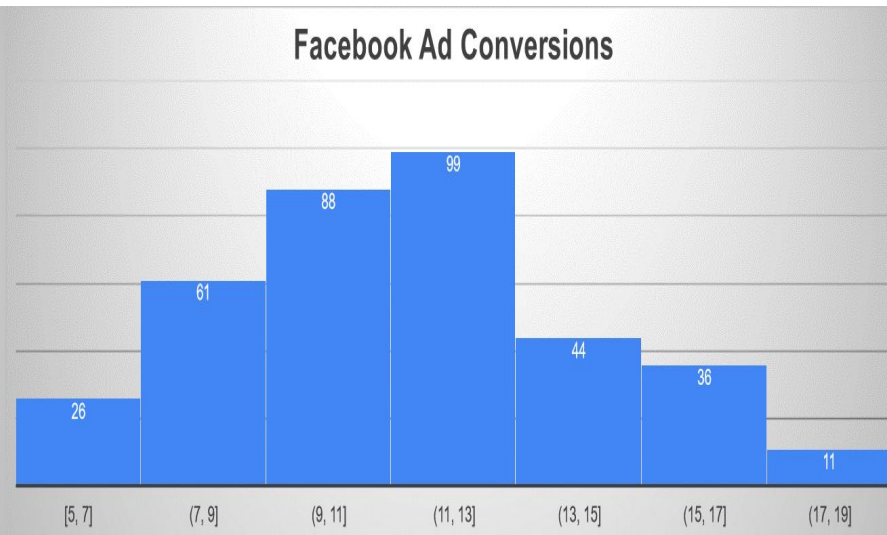
Sample Type

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

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? Yes

Does the conversions data have a normal distribution? No

Variable Types

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

Facebook Ad Views: Quantitative-Discrete (It's a count of views, so discrete numerical data)

Facebook Ad Clicks: Quantitative-Discrete (A count of clicks, which is discrete numerical data)

Cost per Facebook Ad: Quantitative-Continuous (Cost is a continuous numerical value)

Facebook Click-Through Rate: Quantitative-Continuous (Rates are typically continuous numerical values)

Facebook Conversion Rate: Quantitative-Continuous (Conversion rate is a continuous numerical value)

AdWords Ad Views: Quantitative-Discrete (A count of views, discrete numerical data)

AdWords Ad Clicks: Quantitative-Discrete (A count of clicks, discrete numerical data)

Cost per AdWords Ad: Quantitative-Continuous (Cost is a continuous numerical value)

AdWords Click Through Rate: Quantitative-Continuous (Click through rates are continuous numerical values)

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

What is your hypothesis based off the evaluation question?

Hypothesis: The number of clicks on Facebook ads has a significant effect on the number of conversions.

Question and Hypothesis

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

Independent Variable: Facebook Ad Clicks (number of clicks)

Dependent Variable: Facebook Ad Conversions (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: 44.04

Mean number of Adware conversions: 11.74

p-Value: 1.09×10^{-11}

Hypothesis

After running the test, was your hypothesis proven correct?

Based on this analysis, we can reject the null hypothesis (H_0) which stated that the number of clicks on Facebook ads does not have a significant effect on the number of conversions. Instead, we accept the alternative hypothesis (H_1) that there is a significant effect of Facebook Ad Clicks on Conversions.

End of Section 3

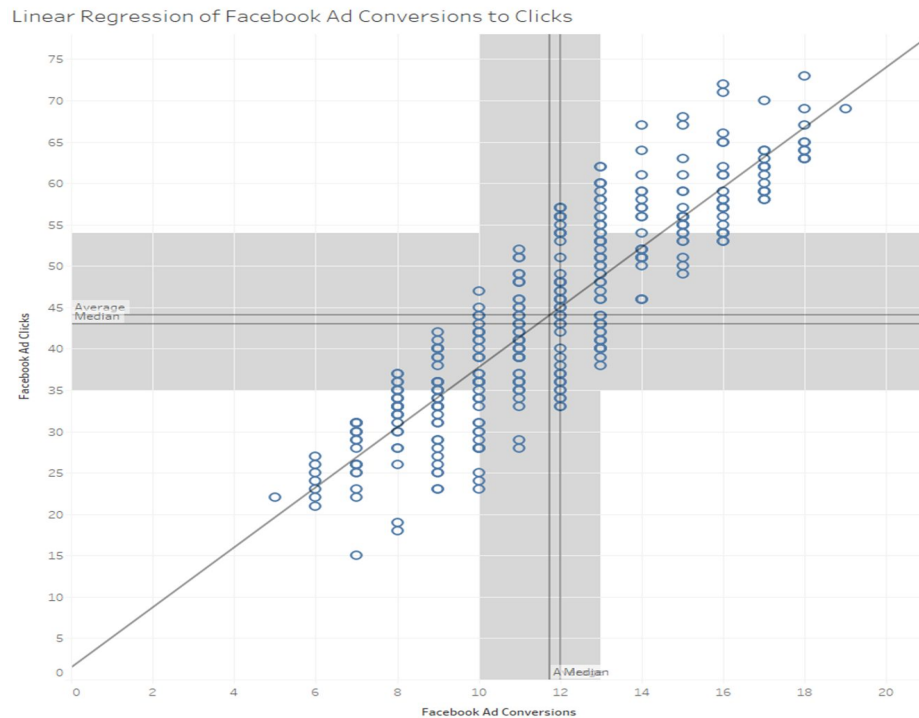
Determining a Model

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

Linear Regression due to the nature of the way data plots.

Modeling

Finally, include a visualization of your complete model.



End of Section 4

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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: I think this was a very interesting project. It was great to see how the data related and to be able to build charts and viz to make the data easier to understand. I want to keep learning more about statistics and be able to take this to next level. I am taking a class now on Tableau and learning how to make more interesting and better visualizations.

Thanks!

