Course 3 Capstone

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: 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 conversions in the provided data.

Mean: 5.98

Median: 6

Mode: 5

Standard Deviation

Determining variance in data helps you understand the spread or dispersion of the data points around the mean. Below, enter the standard deviation of the provided data.

Standard Deviation of Clicks: 14.36

Standard Deviation of Conversions: 1.62

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.

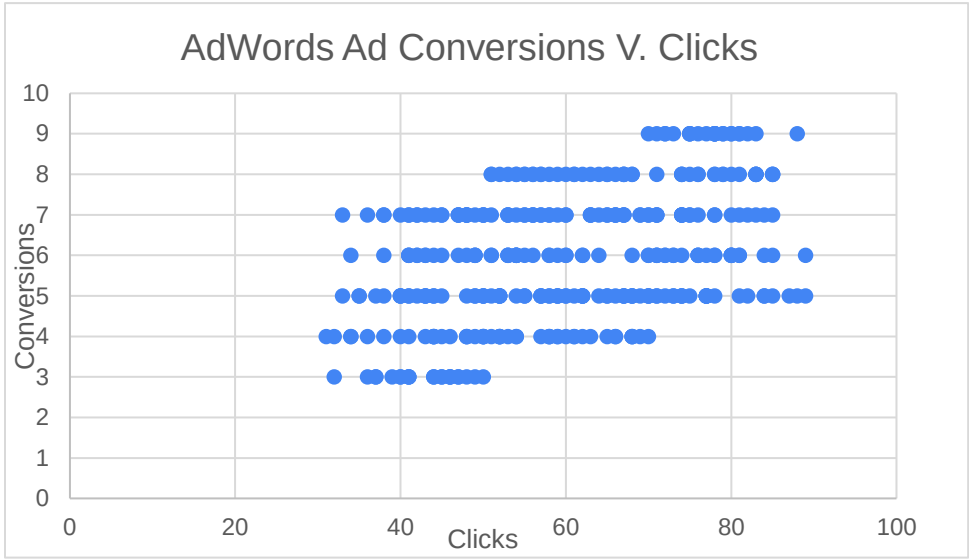
	Number of Conversions by Grouping for 2019			
Number of Conversions	1 to 5	6 to 10	11 to 15	16+
Number of Occurrences	156	209	0	0

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: 0.447

Scatter Plot of your data:

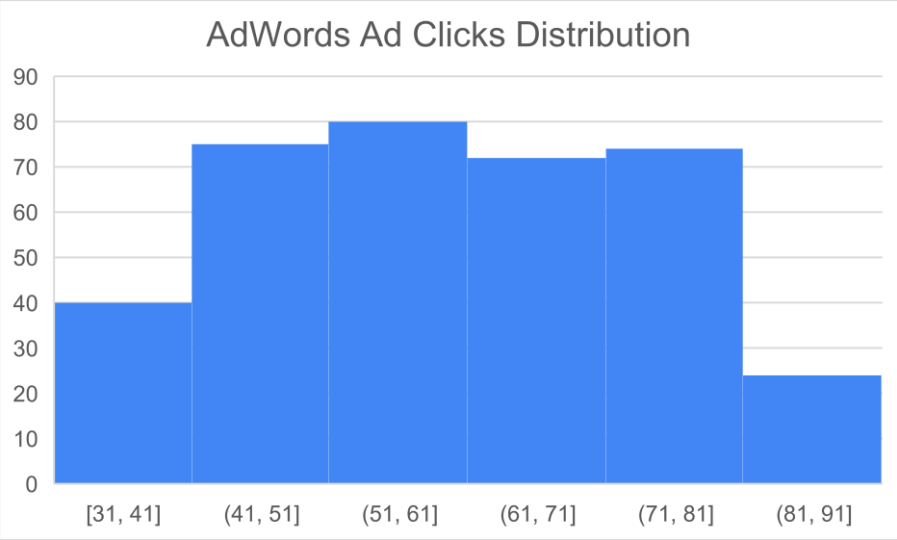


End of Section 1

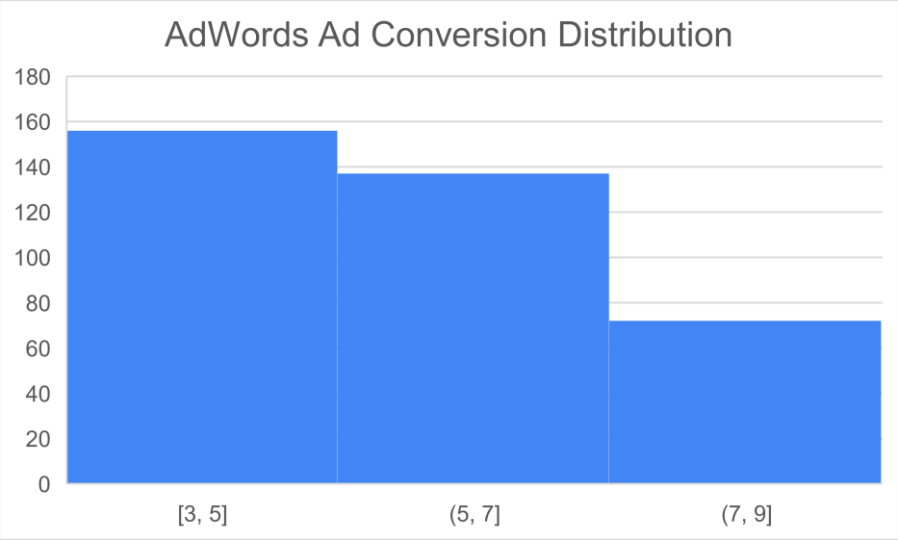
Sample Type

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:

The Click Distribution is normal with an average number of clicks being the most of the sample and half above or below the mean.
The Conversion Distribution is different with most of the sample being skewed to the left below the mean and it gets fewer the more we go to the right meaning that most of the conversion is small and the higher it gets the lower the percentage becomes of the total sample.

Does the clicks data have a normal distribution? Yes.

Does the conversions data have a normal distribution? No, It’s skewed to the left.

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: AdWords Click-Through Rate, AdWords Conversion Rate.

Discrete: AdWords Ad Views, AdWords Ad Clicks, AdWords Ad Conversions, Cost per AdWords Ad, AdWords Cost per Click.

Qualitative:

Nominal:

Ordinal: AdWords Ad Campaign.

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?
The number of Conversion will increase if we advertised on Facebook platform rather than AdWords platform.

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? The platform.

What is your dependent variable? The number of Conversion.

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: 11.742

Mean number of Adware conversions: 5.980

p-Value: 0.0045597E-143

Hypothesis

After running the test, was your hypothesis proven correct? Yes.

Do your findings support a null or an alternative hypothesis? It support the alternative hypothesis.

What's your conclusion about your main hypothesis? Is there a difference, and is it what your hypothesis predicted?

Yes, there is a significant difference as predicted by the hypothesis.

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:

Which model makes the most sense to use and why?

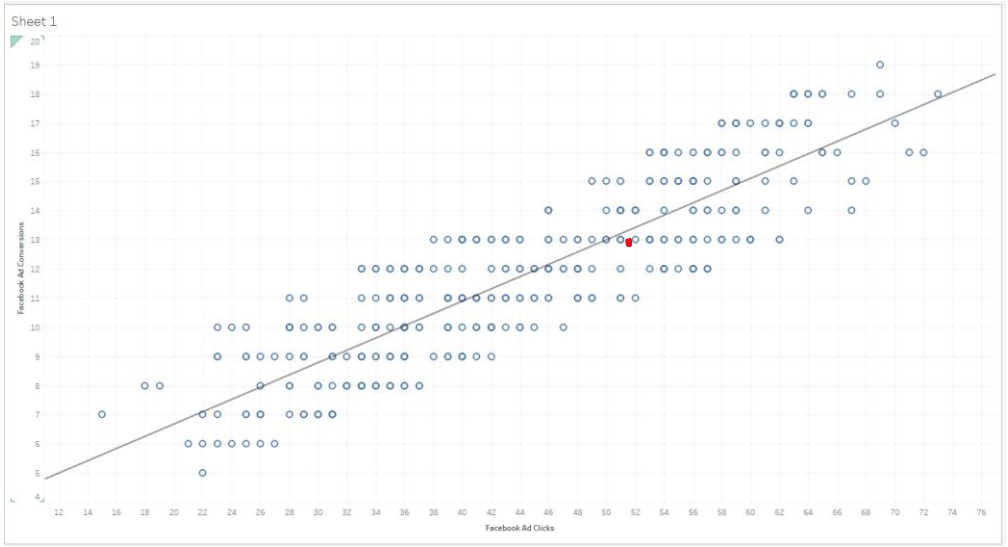
Linear Regression. Its purpose is to predict a dependent variable based on an independent variable which is what we want to do with predicting the number of conversions given the number of clicks.

Variable requirements are met because both are quantitative variables.

Assumptions are also all met.

Modeling

Finally, include a visualization of your complete model.



Based on my model 50 click would get 12.99 conversion. It’s the red dot in the chart.

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: Facebook as an advertising platform is cheaper and yields more traffic than Google's AdWords platform therefore It's recommended to use the Facebook platform in future campaigns.