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 [why this is helpful]. Below, enter the standard deviation of the provided data.

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.

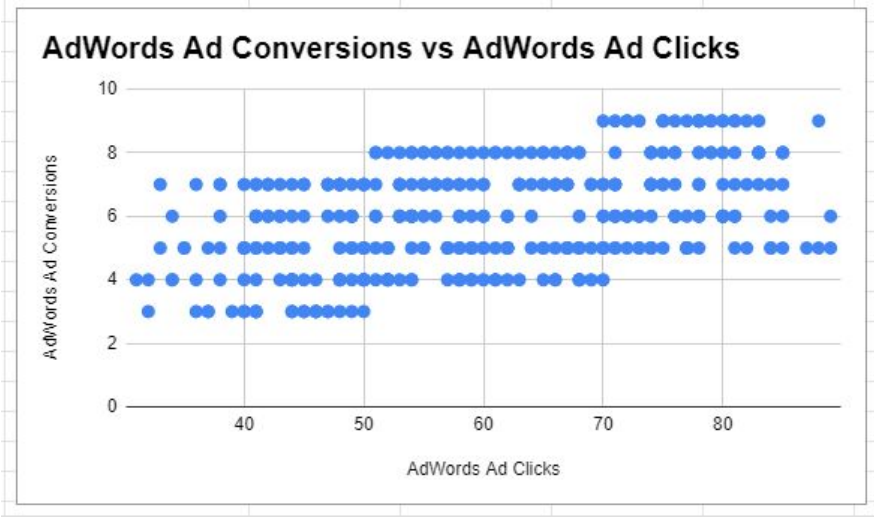
	Number of AdWords Conversions by Grouping for 2019			
Number of conversions	1 to 5	6 to 10	11 to 15	16+
Number of Occurences	156	209	0	0

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: **0.45**

Scatter Plot of your data:

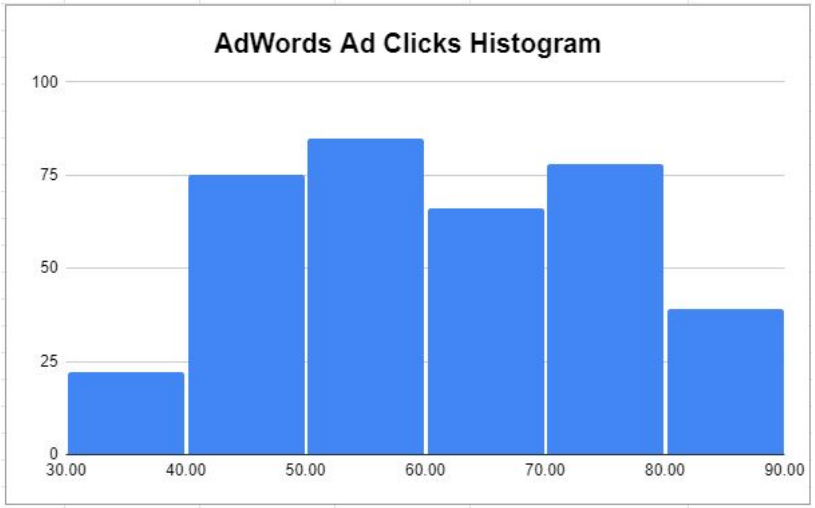


End of Section 1

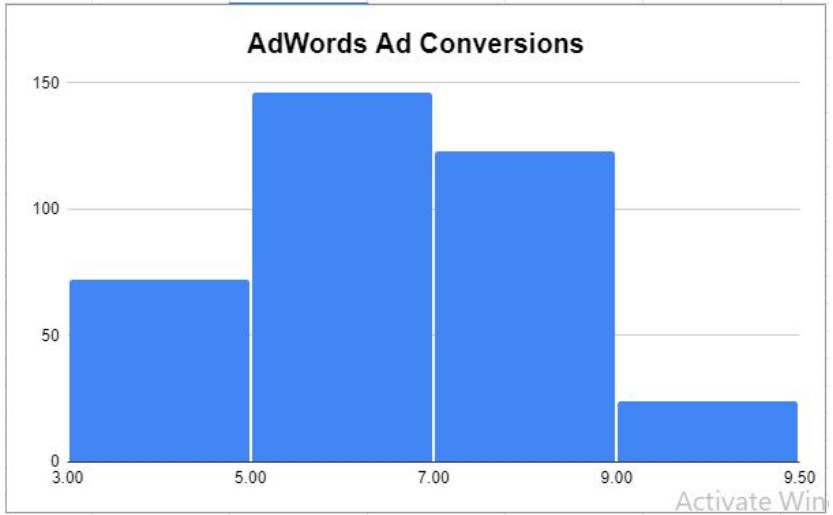
Sample Type

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, it does**

Does the conversions data have a normal distribution? **Yes, it does**

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 Cost per Click, AdWords Click-Through Rate, AdWords Conversion Rate, AdWords Cost per Click**

Discrete: **AdWords Ad Views, AdWords Ad Clicks , Cost per AdWords Ad,**

Qualitative:

Nominal: xx

Ordinal: **AdWords Ad 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

What is your hypothesis based off the evaluation question?

Yes, there is a difference between both platforms. Our number of conversions will be greater if we advertise on the Facebook platform rather than the 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? **Ad Clicks**

What is your dependent variable? **Ad 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: **11.74246575**

Mean number of Adword conversions: **5.980821918**

p-Value: **0.0**

Hypothesis

After running the test, was your hypothesis proven correct?

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

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

There is a statistically significant difference between Facebook Ad conversions and AdWords Ad Conversions. This is what my Hypothesis predicted.

End of Section 3

Determining a Model

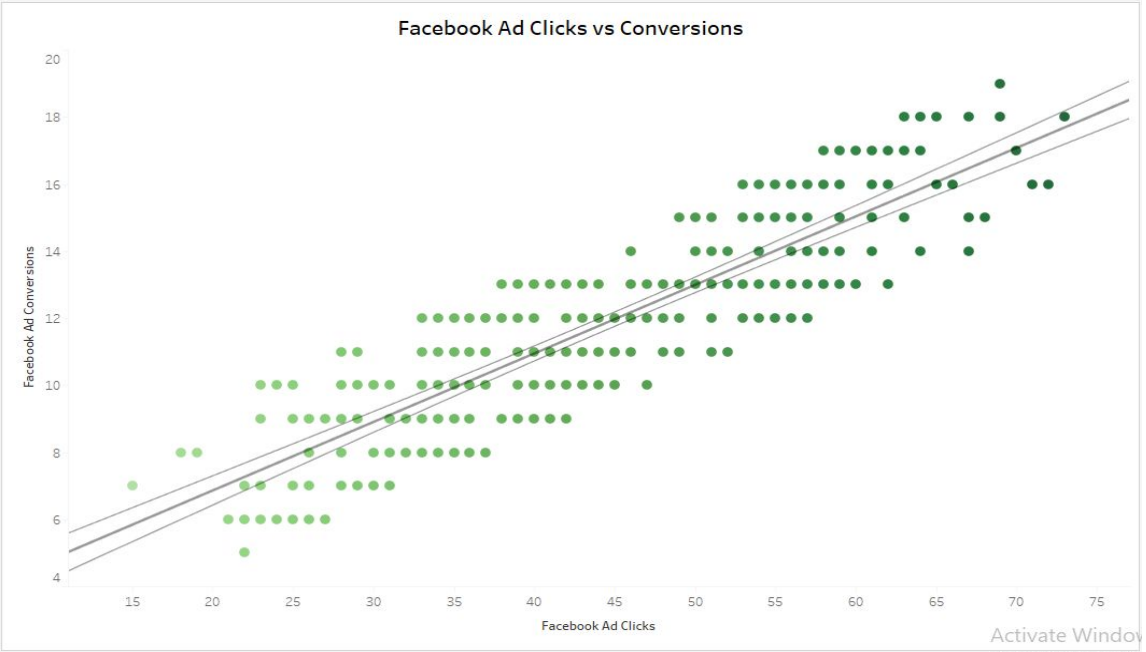
Based off what you know so far, you'll need to determine if your data meets the assumptions for a chosen model. Including:

Which model makes the most sense to use and why?

Simple linear regression because we want to predict the amount of conversions we will get (a quantitative variable) based on clicks (another quantitative variable)

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?

- **There is significant difference between Facebook and AdWords conversion.**
- **Money would be better spent if put on Facebook Ads platform.**
- **From the model, we can calculate the expected number of Conversions based on number of clicks using the equation of the line. This can help my client budget Marketing and Ad spent based on expected number of conversions.**