

Course 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: 14.36

Standard Deviation of Conversions: 1.628

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.

	A	B
1		COUNTA of
2		0
3	3	22
4	4	50
5	5	84
6	6	62
7	7	75
8	8	48
9	9	24
10	AdWords Ad Col	1
11	Grand Total	366

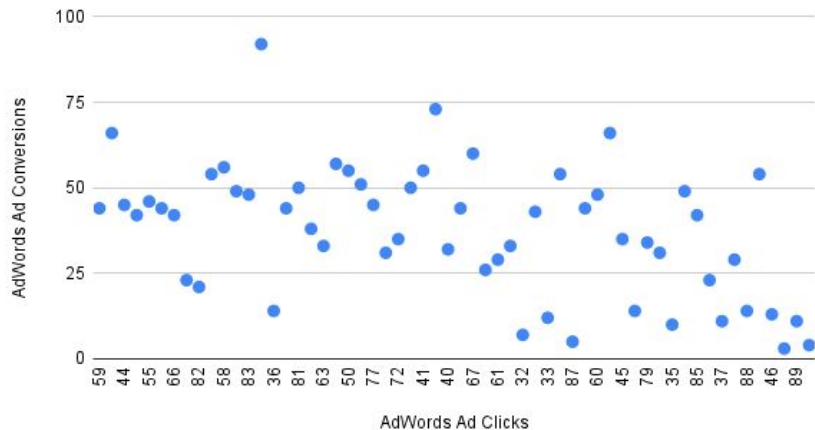
Scatter Plot

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: 0.44799

Scatter Plot of your data:

AdWords Ad Conversions vs AdWords Ad Clicks



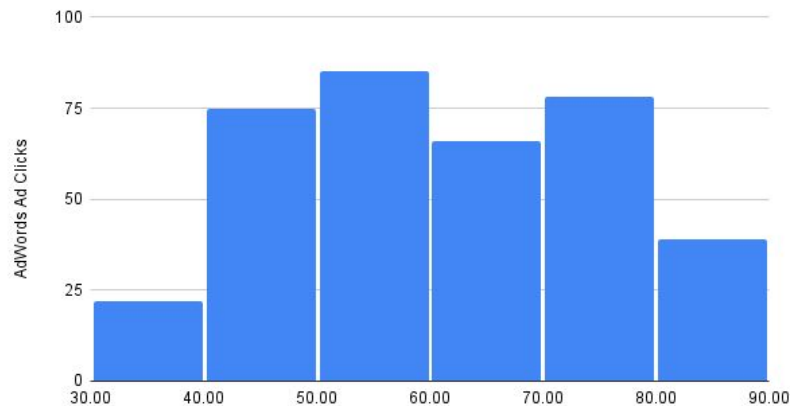
End of Module 1

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:

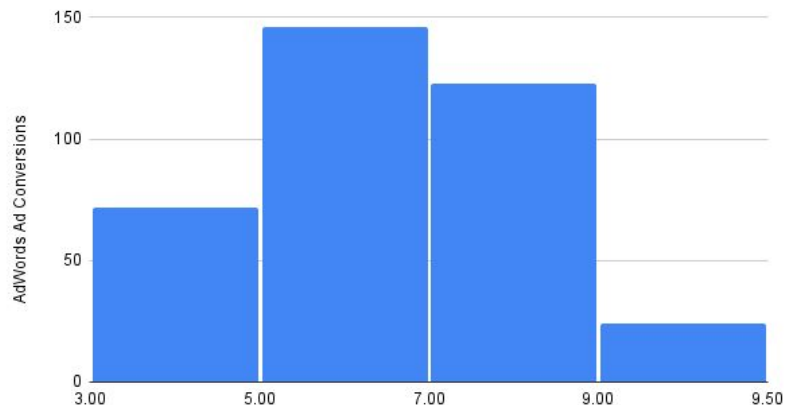
Histogram of your clicks data:

AdWords Ad Clicks



Histogram of conversions data:

AdWords Ad Conversions



Module 2: 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? Yes

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 Ad Views, AdWords Ad Clicks

Qualitative:

Nominal: –

Ordinal: –

End of Module 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?

There is a significant difference between Facebook Ad Conversion Vs
AdWord Ad Conversions campaigns

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 independent variable would typically be the type of ad campaign (AdWords or Facebook), as this is the variable that is manipulated or controlled by the researcher.

What is your dependent variable? : The dependent variable would be the number of conversions, as this is the variable that is measured and expected to change based on the type of ad campaign.

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: 11.74

Mean number of Adware conversions: 5.98

p-Value: 0

Hypothesis

After running the test, was your hypothesis proven correct?

Do your findings support a null or an alternative hypothesis?

Alternative

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

Since the p-value from TTEST formula came out as 0, it means that the difference between Facebook Ad Conversions and AdWords Ad Conversions campaigns is statistically significant.

This result supports my hypothesis that there is a significant difference between the two campaign types.

End of Module 3

Determining a Model

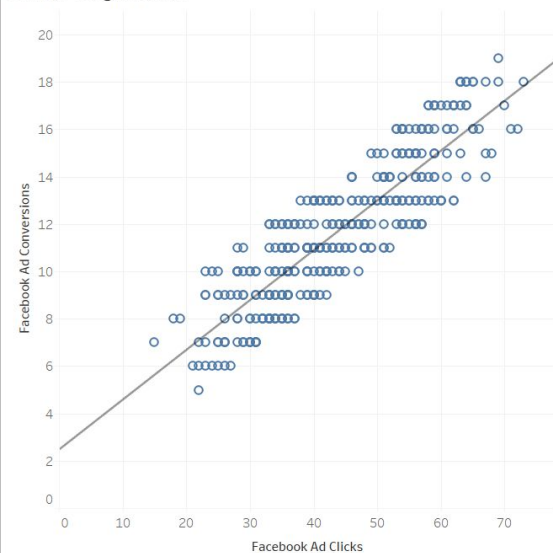
Based off what you know so far, you'll need to determine if your data meets the assumptions for a chosen model. Including:

I used all 3 models but the most suitable for the scenario was Linear Regression because For my analysis on predicting Facebook Ad Conversions based on Facebook Ad Clicks, Simple Linear Regression is suitable when you want to understand the relationship between two continuous variables, such as predicting one variable based on the other. In this case, you want to predict the number of conversions (a continuous variable) based on the number of clicks (another continuous variable). Simple Linear Regression will help you create a model that can predict the expected number of conversions for a given number of clicks.

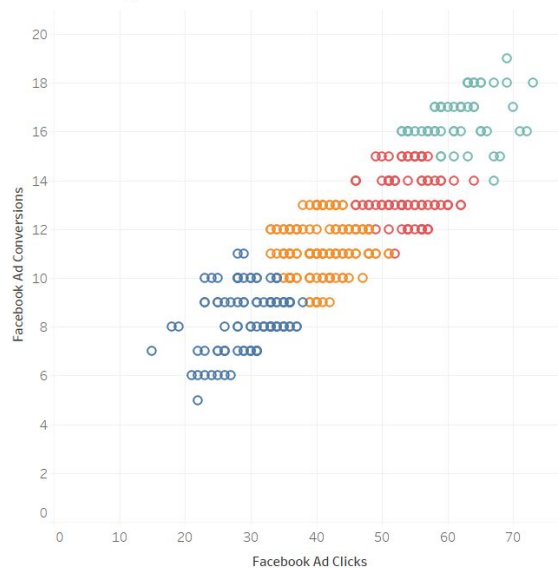
Modeling

Finally, include a visualization of your complete model.

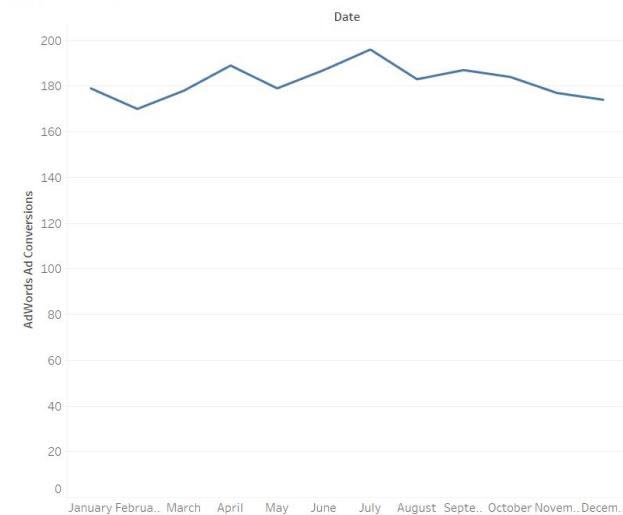
Linear Regression



Cluster Analysis



Time Series



End of Module 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: Based on the analysis, we found a strong positive relationship between Facebook Ad Clicks and Conversions. The Simple Linear Regression model predicts conversions based on clicks, helping in future ad planning. I recommend focusing on increasing clicks for higher conversions. For future analyses, consider including additional variables for a more comprehensive model.