Reminders…

- You'll use **this file** for the entirety of this course. Save it in a place where you can easily access it over the upcoming weeks.
  - You can edit and save this document in Google Drive
  - If you download this document, keep it in a place you can find it later
- The content you put into this document will be used for later lessons
  - It is recommended that you do not skip any capstone readings in any of the lessons
  - It is recommended that you start you complete update this document after every week of content and start with week 1
- Requirements:
  - Answer all the questions in this document
  - When complete, download this as a PDF document for submission in the peer review assignment.
  - Don't know how to download as a PDF? You can find more information about downloading this by clicking here.
  - Remove this slide before submitting

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: 14.36

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	Number of Adwords Conversions for grouping by 2019			
	1 to 6	6 to 10	10 to 15	15+
Number of Occurencies	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: 0.44

Scatter Plot of your data:
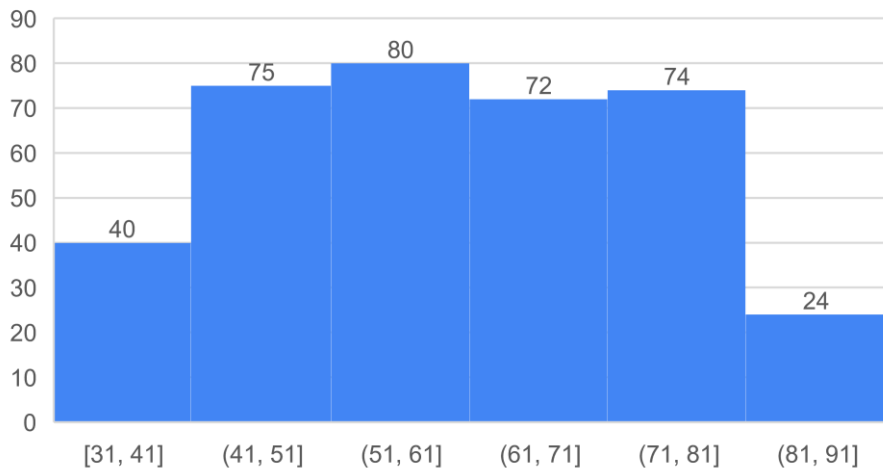### AdClicks vs Ad Conversions
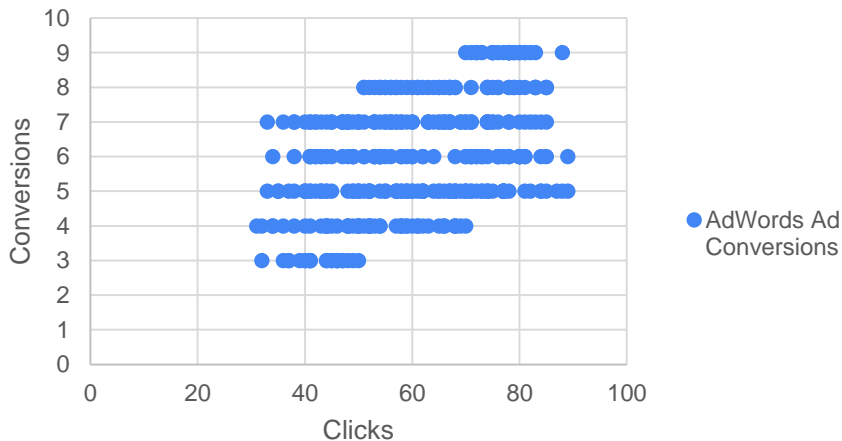
End of Section 1

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:
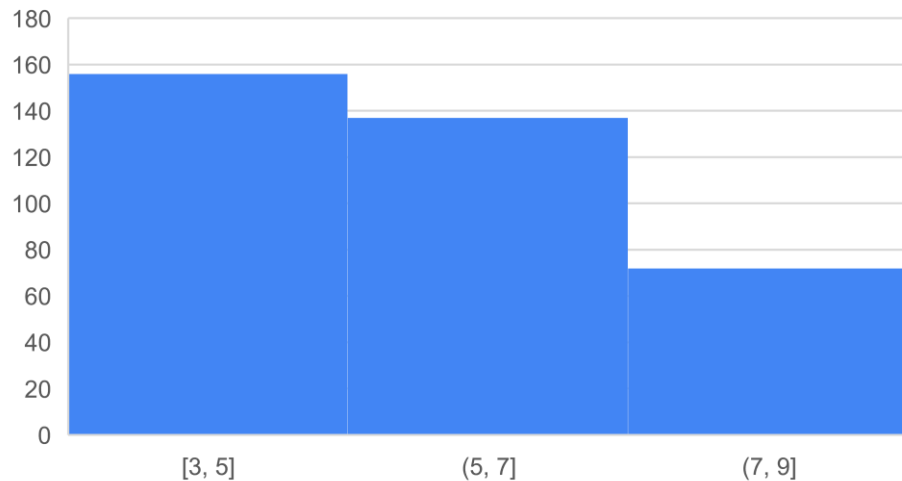
Histogram of your clicks data:

Histogram of conversions data:

Sample Type

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:

Quantitative:

    Continuous: Adwords cost per click, Convertion Rate

    Discrete: Adconversions, Cost per Ad words Ad

Qualitative:

    Nominal: Ad clicks, Cost per Ad words ad

    Ordinal: Click through Rate,

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?
After calculating the difference between the facebook platfrom and adwords platform there is a significant difference.
Facebook Conversions Total = 4286
Ad Works Conversions Total = 2183
Difference = 2103.

As we can observe Ad works conversions are way too less comparing with facebook conversions, to increase the Ad works conversions we have to change the strategy of Adworks, one of the best strategy would be comparing with facebook strategies and implementing it with the Ad Works. As in Facebook More clicks lead to more conversions.

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? Clicks

What is your dependent variable? Conversions

Running a Test

Mean number of Facebook conversions: 11.74

Mean number of Adware conversions: 5.98

p-Value: 1.43

Hypothesis

After running the test, was your hypothesis proven correct?

Do your findings support a null or an alternative hypothesis? 1.43

As the Alpha value = 0.05 and the P-value resulted in = 1.43. In this case as the p=value is greater than alpha value we will be rejecting Alternate Hypothesis and accepting the Null hypothesis.
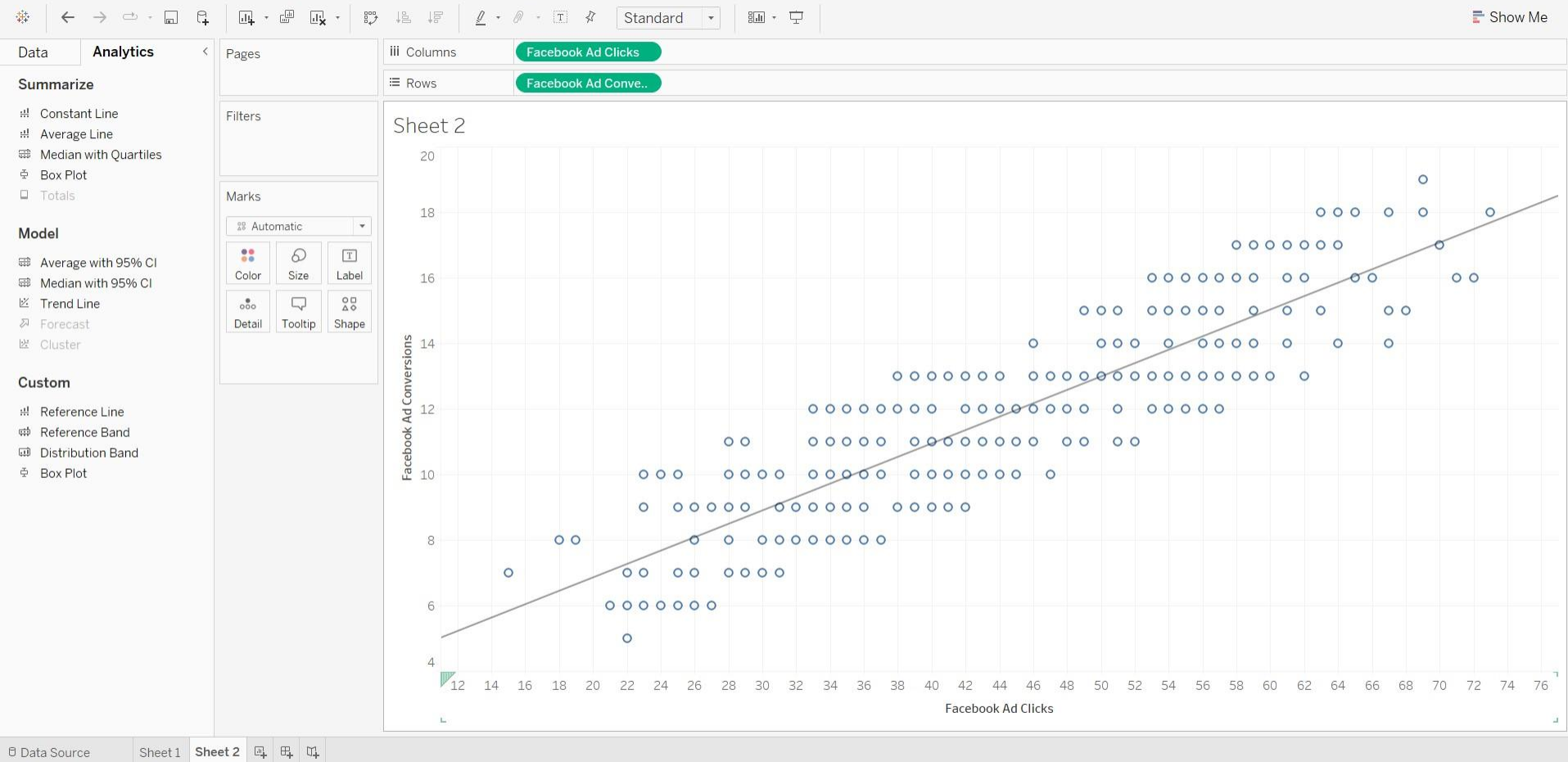
End of Section 3

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?

A simple linear regression model is appropriate when we want to predict a continuous numerical value. As in this case, (the number of conversions) based on a single predictor variable (the number of ad clicks). It assumes a linear relationship between the predictor and the target variable. By fitting a regression model to the given data, we can estimate the expected number of conversions based on the given number of ad clicks.

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?

Enter your insights here: As per the visualization chart, we can see that for 50 Facebook ad clicks there would be 13-14 Facebook conversions approximately.