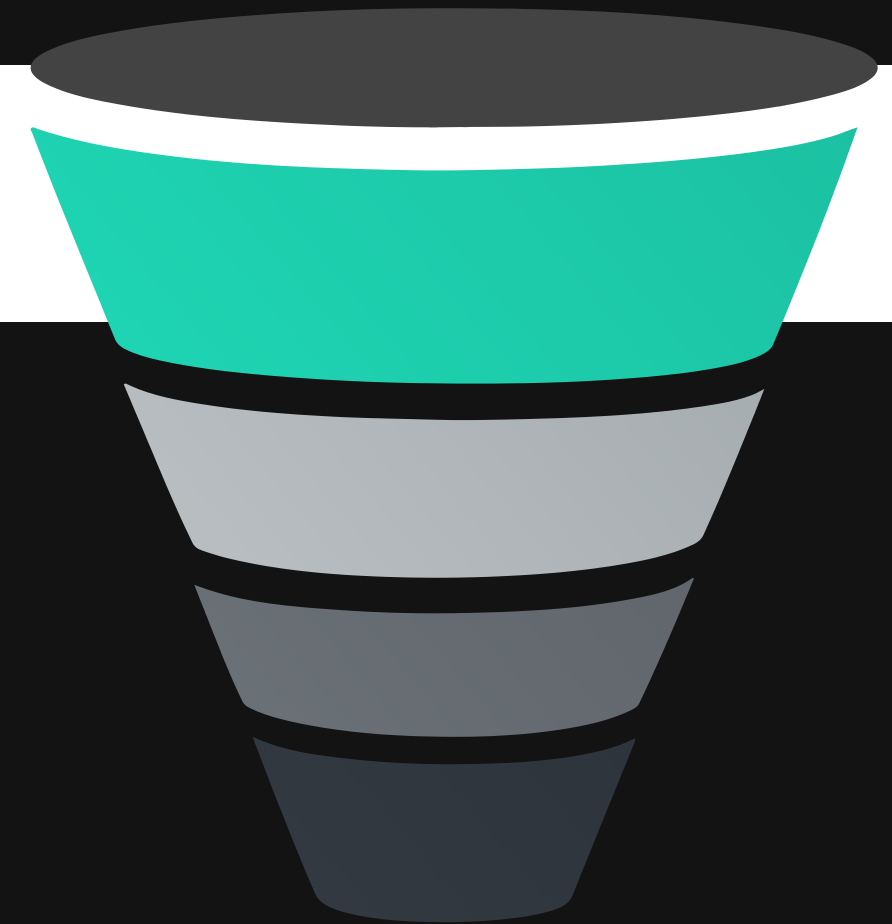


# STRATEGIC BUSINESS ANALYTICS PLAYBOOK

## DATA SIGNAL VS. NOISE

**Draw a conclusion for an  
experiment**



# To get started

**Make a Copy** of this Google Slide deck and complete your assignment on these slides, then submit the link to this deck in the Learning Management System.

## Instructions

- Go to File > Make a Copy > Entire Presentation
- Choose the folder in your Drive where you want to save the slides
- Rename your copy and add your name to the file

**Example:** Playbook Assignment: Draft a business analytics project plan–MRogers

[Watch this video for a quick demo](#)

# Draw a conclusion for an experiment

For most experiments, there is no way to collect data on the entire group of interest you want to reach. One way statisticians deal with this limitation is by working with a sample. They take what they learn from the sample and estimate or predict how it might apply to the entire population.

In this assignment, you will calculate summary statistics and use an online calculator to provide a p-value. You will use the value to draw a conclusion for an experiment.

REVIEW IT



TRY IT



APPLY IT



SUBMIT IT



# Introduction

Last week you set up of an experiment to test two versions of the Uber Eats order page.

Recall that Uber's food delivery platform displays grocery stores, restaurants and eateries by rank. The team wants to understand the level of detail on the order page that works better to improve click-through rates from the order page to adding a food item to the cart on desktop.

Now that you've run several tests, you'll use the knowledge you gained this week to review the test results. You'll use a spreadsheet and an online calculator to calculate p- values and draw a conclusion.

Work with the experiment results in the worksheet provided, then transfer your final answers to the playbook.

REVIEW IT



TRY IT



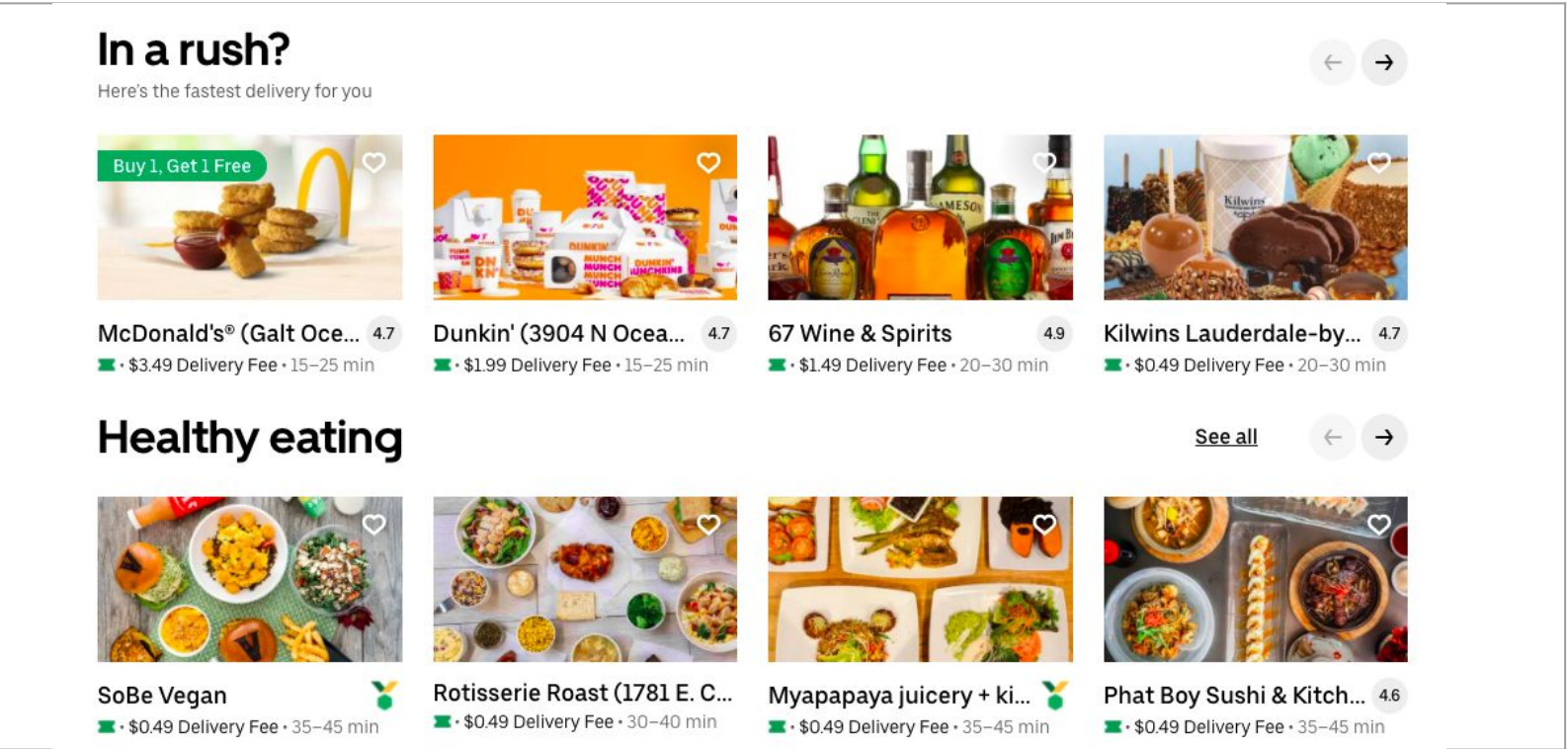
APPLY IT



SUBMIT IT

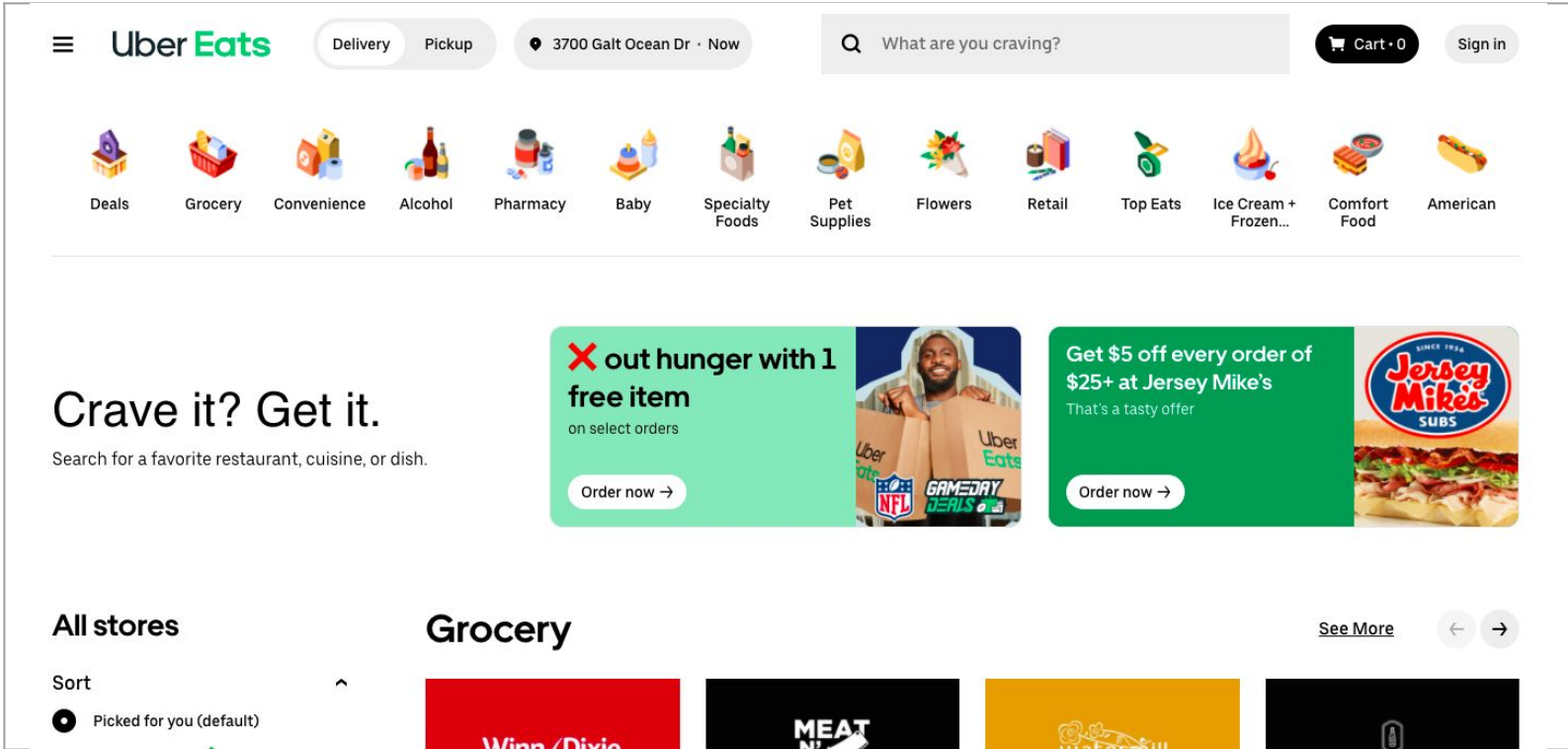


# REVIEW IT: Treatment A and B: fewer or more details?



Fewer details with  
less information on the order page

A



More details with  
more information on the order page

B

## **REVIEW IT: Calculating p-values**

Review step-by-step instructions for collecting inputs from an experiment in a spreadsheet, then use an online calculator to calculate the p-value.

**REVIEW IT**

See the spreadsheet with observations from an experiment being conducted to determine whether adding a specific feature to an online ad will lead to a higher click-through rate.

**SEE IT**

Access the calculator Devanshu used to conduct a Z-test for two population proportions.

**ACCESS IT**

# REVIEW IT: Experiment set up instructions

For this experiment, the null and alternative hypotheses have already been set up.

## **The null and alternative hypotheses**

The null hypothesis is that the average click through rate for the displays is the same. The alternative hypothesis is that the average click through rate for the displays is different.

## **The data**

Access the [data](#) associated with this experiment.

Make **your own copy** of the dataset in order to answer the questions on the following slides.

# **TRY IT:** What are your null and alternative hypotheses

QUESTION	YOUR ANSWERS
What is the null hypothesis?	
What is the alternative hypothesis?	



# TRY IT: Calculate treatment sample sizes

QUESTION	YOUR ANSWERS
How many customers saw 'Treatment A'?	
How many customers saw 'Treatment B'?	
What is the total number of customers in the experiment?	

# TRY IT: Select a testing method and write ship criteria

QUESTION	YOUR ANSWERS
What is the CTR proportion for 'Treatment A'?	
What is the CTR integer value for 'Treatment A'?	
What is the CTR proportion for 'Treatment B'?	
What is the CTR integer value for 'Treatment B'?	

## TRY IT: Calculate your p-value and make a ship decision

QUESTION	YOUR ANSWERS
What is the p-value?	
What's your Type I error threshold?	
Which hypothesis do you choose?	

Access the [link to the online calculator](#) used in the module

## **REFLECT ON IT:** What confounding variables could be hidden in your results?

Reflect on what you learned in this module. There wasn't a lot of information provided about the data collection for this experiment. Think about what confounding variables might exist in this analysis.

*1. Possible confounding variables to these experiment results include....*

## **REFLECT ON IT:** What else might we do to increase the chances of finding a difference?

Reflect on what you learned in this module. If you weren't constrained to this dataset, what else could you do to improve the chance of finding statistically significant differences between version A and version B of this page?

- 1. Possible extensions of this experiment that might lead to finding statistically significant differences include....*

# SUBMIT IT: Share link to your completed assignment

ACTION	INSTRUCTIONS	NOTES
REVIEW	Review each item and make sure you have completed an answer for each in the appropriate location	
ACCESS	Go back to the Assignment in the <a href="#">Learning Management System</a>	
SHARE	Copy/paste the link to your Assignment in the system by the due date. Make sure <b>anyone on the internet with the link</b> can view the document.	
CONFIRM	Make sure the assignment was accepted by the Learning Management System	