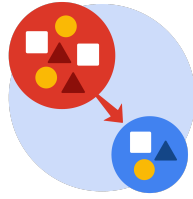


## Course Four

### From Data to Insight: The Power of Statistics



#### Instructions

Use this PACE strategy document to record decisions and reflections as you work through this end-of-course project. As a reminder, this document is a resource that you can reference in the future, and a guide to help you consider responses and reflections posed at various points throughout projects.

#### Course Project Recap

Regardless of which track you have chosen to complete, your goals for this project are:

- ☐ Complete the questions in the Course 4 PACE strategy document
- ☐ Answer the questions in the Jupyter notebook project file
- ☐ Compute descriptive statistics
- ☐ Conduct a hypothesis test
- ☐ Create an executive summary for external stakeholders

#### Relevant Interview Questions

Completing this end-of-course project will empower you to respond to the following interview topics:

- How would you explain an A/B test to stakeholders who may not be familiar with analytics?
- If you had access to company performance data, what statistical tests might be useful to help understand performance?
- What considerations would you think about when presenting results to make sure they have an impact or have achieved the desired results?
- What are some effective ways to communicate statistical concepts/methods to a non-technical audience?
- In your own words, explain the factors that go into an experimental design for designs such as A/B tests.



## Reference Guide

This project has four tasks; the visual below identifies how the stages of PACE are incorporated across those tasks.



## Data Project Questions & Considerations



### PACE: Plan Stage

- What is the main purpose of this project?

- What is your research question for this project?

- What is the importance of random sampling?



- Give an example of sampling bias that might occur if you didn't use random sampling.



### **PACE: Analyze & Construct Stages**

- In general, why are descriptive statistics useful?

- How did computing descriptive statistics help you analyze your data?

- In hypothesis testing, what is the difference between the null hypothesis and the alternative hypothesis?

- How did you formulate your null hypothesis and alternative hypothesis?



- What conclusion can be drawn from the hypothesis test?



### **PAC:** Execute Stage

- What key business or organizational insight(s) emerged from your A/B test?

- What recommendations do you propose based on your results?