

Scenario  
Examples  
Choosing the  
Right Statistic  
Part II

# Scenario 16

- The supervisor now wants to know if the wait time and the length of time spent on the call help predict whether a customer continues services with the company or not. They'd like to know specifically which is more important – wait time or length of time spent on the call.
- What are the variables of interest?
  - Wait times - IV
  - Continues service – DV
- Are you testing or comparing anything?
  - Yes
- Is the IV continuous or categorical?
  - Continuous

# Scenario 16

- The supervisor now wants to know if the wait time and the length of time spent on the call help predict whether a customer continues services with the company or not. They'd like to know specifically which is more important – wait time or length of time spent on the call.
- Is the DV continuous or categorical?
  - Categorical
- How many levels of the DV do you have?
  - 2
- Do you need to know how much influence something has?
  - Yes
- You should be doing stepwise binary logistic regression

# Scenario 17

- Does the customer's age influence how long they spend on the phone with customer service?
- What are the variables of interest?
  - Age - IV
  - Time on the phone – DV
- Are you testing or comparing anything?
  - Yes
- Is the IV continuous or categorical?
  - Continuous
- Is the DV continuous or categorical?
  - Continuous
- You should be doing simple linear regression

# Scenario 18

- Does the customer's age and yearly income influence how long they spend on the phone with customer service?
- What are the variables of interest?
  - Age & Yearly Income - IV
  - Time on the phone – DV
- Are you testing or comparing anything?
  - Yes
- Is the IV continuous or categorical?
  - Continuous

# Scenario 18

- Does the customer's age and yearly income influence how long they spend on the phone with customer service?
- Is the DV continuous or categorical?
  - Continuous
- Do you think other variables can influence your DV?
  - No
- You should be doing multiple linear regression

# Scenario 19

- Does the customer's age and yearly income influence how long they spend on the phone with customer service?
- What are the variables of interest?
  - Age & Yearly Income - IV
  - Time on the phone – DV
- Are you testing or comparing anything?
  - Yes
- Is the IV continuous or categorical?
  - Continuous

# Scenario 19

- Does the customer's age and yearly income influence how long they spend on the phone with customer service?
- Is the DV continuous or categorical?
  - Continuous
- Do you think other variables can influence your DV?
  - No
- You should be doing multiple linear regression



# Scenario 20

- Does the customer's age and yearly income influence how long they spend on the phone with customer service and how long they have to wait for service?
- What are the variables of interest?
  - Age & Yearly Income - IV
  - Time on the phone & wait time – DV
- Are you testing or comparing anything?
  - Yes
- Is the IV continuous or categorical?
  - Continuous

# Scenario 20

- Does the customer's age and yearly income influence how long they spend on the phone with customer service and how long they have to wait for service?
- Is the DV continuous or categorical?
  - Continuous
- Do you think other variables can influence your DV?
  - No
- You should be doing canonical correlation

# Scenario 21

- You are creating a new customer satisfaction survey.
- You should be doing exploratory factor analysis

# Scenario 22

- You are helping to validate an existing customer satisfaction survey, to make sure it still applies to today's customers.
- You should do confirmatory factor analysis.

# Scenario 23

- You've been hired for a research department and they want to create a theory as to how and when a customer would get frustrated enough that they would call in for help.
- You should perform structural equation modeling.

# Scenario 24

- You are trying to see if there is a relationship between age and customer satisfaction, ranked 1-10.
- How many variables do you have?
  - 2
- Are the variables continuous or categorical?
  - Continuous
- You should run the Pearson's correlation

# Scenario 25

- You are trying to see if there is a relationship between gender and whether a customer was satisfied or not.
- How many variables do you have?
  - 2
- Are the variables continuous or categorical?
  - Categorical
- You should run the Spearman Rank correlation

# Scenario 26

- You have been asked to examine the customer base, using the variables of gender, age, ethnicity, and yearly salary.
- How many variables do you have?
  - More than 2
- Are you trying to predict group membership?
  - No
- You should run cluster analysis



# Scenario 27

- You have been asked to examine the customer base, using the variables of gender, age, ethnicity, and yearly salary. Your boss would like to know if customers qualify for silver, gold, or platinum tier services.
- How many variables do you have?
  - More than 2
- Are you trying to predict group membership?
  - Yes
- You should run discriminant function analysis

Questions?