BA Homework #2

Business Analytics - Spring 2020, NYU

INSTRUCTIONS & SUBMISSION

Complete the problems below and submit via NYUClasses. Submit a PDF file with your answers, graphs, and R code.

PROBLEM 1: Citibike Analysis

Complete an analysis of Citibike using the "citibike.csv" dataset from *Datasource: BusinessAnalytics/BAData/JC-201709-citibike-tripdata.csv*. Your analysis should include summary statistics (mean, median, variance, standard deviation, range, quartiles). For more details on Citibike system data go here: https://www.citibikenyc.com/system-data

Analytics Questions:

1. Compute summary statistics for tripduration
2. Compute summary statistics for age
3. Compute summary statistics for tripduration in minutes (Need to transform tripduration from seconds to minutes)
4. Compute the correlation between age and tripduration

Business Questions:

1. What is the total revenue assuming all users riding bikes from 0 to 45 minutes pay $3 per ride and user exceeding 45 minutes pay an additional $2 per ride.
2. Looking at tripduration in minutes, what can you say about the variance in the data.
3. What does this mean for the pricing strategy?
4. What does this mean for inventory availability?

Datasource: BusinessAnalytics/BAData/JC-201709-citibike-tripdata.csv

PROBLEM 2: Zagat Descriptive Analytics

Complete an analysis of Zagat rating using the "zagat" dataset. For details on Zagat ratings go here: https://www.zagat.com/about-us

Analytics Questions:

1. What can you say about the central tendency of the ratings?
2. What can you say about the spread and dispersion of the ratings?
3. What are the correlations between rating dimensions?
4. Using the information in 1-3, design a weighted average (index) that computes scores for each restaurant. Your index needs to reflect which ratings (decor vs food vs service vs price) you wish to amplify with loads/weights

Business Questions:

1. What makes a business more profitable?
2. If you were hired to advise a new restaurant operator, what would you recommend in terms of the balance & trade-offs between food, decor, service, and price?

Datasource: BusinessAnalytics/BAData/zagat.CSV