

# **Case Studies for Analytics in Customer Value Management (WS 2019/2020)**

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# Case Study: "Pilgrim Bank (A): Customer Profitability" (HBS: 9-602-104)

- **Use the available data to find out if it is beneficial for Pilgrim Bank if more customers use online banking!**
- **Briefly describe some of the shortcomings of your analyses.**

# Case Study “Alumni Giving” (Darden Business School Case Study UV-6394)

**Answer the research questions outlined at the end of the case study:**

- 1. School A's graduation rate is 10 points higher than school B's. How much higher do we expect A's giving rate to be?**
- 2. How does the answer to question 1 change if we learn that A and B have identical student-to-faculty ratios?**
- 3. Which of the 123 schools has the most (least) impressive giving rate?**
- 4. Consider a school similar to ours (i.e., one with the following characteristics): We have a 67% graduation rate and a student-faculty ratio of 1:17, 34% of the classes have fewer than 20 students, 23% of the classes have more than 50 students, and we have a freshman retention rate of 77%. Should this school's giving rate be greater than or less than 8%?**

# Case Study “Saving Customers at Vigil Home Security” (Darden Case Study UV-6669)

- How do the offers affect the longevity of saved customers relationship?

# Case Study: "Retail Relay (A)", Darden Business School, UV-5738

- Are you happy with the development of the customer base?

# Case Study olist.com

- **Details will follow**
- **Case will build upon the data provided on Kaggle**
  - <https://www.kaggle.com/olistbr/brazilian-ecommerce>

# Case Study Bazaar.com

- Which analysis should Sunil run?
- Which suggestion should Sunil provide?
- Note: Blake, T., C. Nosko and S. Tadelis (2015), "Consumer Heterogeneity and Paid Search Effectiveness: A Large Scale Field Experiment", *Econometrica*, Vol. 83, No. 1, 155–174, Section 2, provided motivation for generation of data used in case study.

# "Star Digital: Assessing Effectiveness of Display Advertising" (Stanford Business School, M-347)

- Answer the following questions that are also outlined in the case study "Star Digital". Note that there is a data sheet available at OLAT that allows you to conduct an empirical analysis.
1. Is online advertising effective for Star Digital?
  2. Is there a frequency effect of advertising on purchase? In particular, the question is whether increasing the frequency of advertising increases the probability of purchase?
  3. Which sites should Star Digital advertise on? In particular, should it put its advertising dollars in Site 6 or in Sites 1 through 5?



# Data Set of Case Study "Star Digital"

| id      | purchase | test | imp_1 | imp_2 | imp_3 | imp_4 | imp_5 | imp_6 |
|---------|----------|------|-------|-------|-------|-------|-------|-------|
| 545716  | 1        | 1    | 0     | 1     | 0     | 0     | 0     | 0     |
| 893524  | 1        | 1    | 1     | 0     | 0     | 17    | 0     | 1     |
| 1372718 | 1        | 1    | 0     | 0     | 0     | 10    | 0     | 0     |
| 971359  | 1        | 1    | 14    | 37    | 1     | 7     | 0     | 7     |
| 59999   | 1        | 1    | 0     | 0     | 0     | 13    | 0     | 0     |
| 842034  | 1        | 0    | 0     | 1     | 0     | 0     | 0     | 0     |
| 731724  | 0        | 1    | 2     | 272   | 0     | 18    | 0     | 2     |
| 49425   | 0        | 0    | 0     | 0     | 0     | 0     | 0     | 1     |
| 1351203 | 1        | 1    | 97    | 214   | 0     | 11    | 3     | 13    |
| 357681  | 0        | 1    | 0     | 0     | 0     | 0     | 0     | 2     |
| 429636  | 0        | 1    | 0     | 2     | 0     | 0     | 0     | 0     |
| 433607  | 1        | 0    | 0     | 0     | 0     | 0     | 0     | 2     |
| 1101847 | 0        | 1    | 0     | 0     | 0     | 0     | 0     | 1     |
| 867427  | 1        | 1    | 0     | 6     | 0     | 0     | 0     | 0     |
| 68980   | 0        | 1    | 0     | 0     | 0     | 0     | 0     | 3     |
| 848782  | 1        | 1    | 0     | 0     | 0     | 14    | 0     | 0     |
| 979407  | 1        | 1    | 0     | 6     | 0     | 0     | 0     | 0     |
| 960829  | 0        | 1    | 0     | 3     | 0     | 0     | 0     | 0     |

# Remark on Assignments

- **Please include your names in file name**
- **1 email/solution per team**
- **Describe/ comment your solution in a short and precise way**
- **Check orthography and grammar!**
- **Only include important code**
  - Include code on data preparation/manipulation
  - Include code on descriptive and inferential analysis
  - No warning messages when loading a package!
    - Use option „Warning=FALSE“
  - R-Markdown cheat sheet:  
<https://www.rstudio.com/wp-content/uploads/2015/02/rmarkdown-cheatsheet.pdf>