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Customer Analytics and Customer Insights

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Assignment 4

Segmentation, Targeting, and Positioning

Data for the assignment

smartwatch_survey.csv

Page Limit

The assignment should not be longer than 5 pages. The suggested length for single tasks is just that – a suggestion.

What to submit

The report in PDF format and an R script (.R file) that reproduces the analysis. Include meaningful comments, so we understand which part of the code is related to which task.

Background

Imagine Intel is considering entering the market for smartwatches. They plan to partner with another company to launch a new product. Potential partners include Aetna, Amazon, and Google. Google would offer integration with Android Wear for full-function smartphone communication synthesis and app access. Health insurer Aetna could be a valuable partner by promoting the watches to businesses concerned with employee well-being. Periodic reminders (e.g., breathe, stand up, walk) would encourage healthier living and save money on company-sponsored healthcare premiums. Amazon is an alternative to Google, with access to the "Alexa" artificial intelligence voice interface. A partnership with Amazon could provide a voice-based interface that might pair well with Bluetooth earbuds. The firm also has an obvious advantage in promotion and distribution, as it can utilize its retail platform.

To decide who to partner with, Intel must carefully select the best customer segment(s) to target and decide what features to include and omit to optimize the watch for the segment(s). The partner they choose should depend on what customer segment(s) they decide to target and what unique benefits they aim to provide. Thus, Intel needs to answer the following questions:

- How can the company effectively segment the market for smartwatches based on differing consumer needs?
- From what segment(s) of the market should Intel draw customers?
- How can Intel position itself, and with which partners should Intel work more strongly in these segments?

To help inform the decision, Intel developed a customer survey to perform a segmentation analysis. The data collection resulted from a collaboration with the University of Oregon's Lundquist College of Business. A survey was sent out to college alumni who graduated after 1996. As an incentive for participation, Intel promised to donate $2 to the Lundquist College of Business scholarship fund for every completed survey. Participants were screened such that only those who owned a smartphone could proceed with the questionnaire. As a result, a total of 1000 alumni completed the survey.

Your task is to help Intel in this segmentation, targeting, and positioning project using the collected data.

Codebook

The provided dataset is in wide format, such that each row represents one respondent. The table below describes the included variables and their coding.

Var name in the csv file	**Description**
id	Respondent-specific counter variable
Attribute importance	The following 12 attributes were rated in terms of their importance in a product on a 7-point scale, where 1 ("very unimportant") and 7 ("very important")
Imp_Innov	Innovation: The ability to benefit from the latest and greatest
Imp_ConstCom	Constant communication: The ability to send and receive subtle notifications at all times about messages and emails from family, friends, and work.
Imp_CreatCom	Creative Communication: The ability to send and receive creative and fun communications such as pictures, emojis, and stickers.
Imp_TimelyInf	Timely information: The ability to receive up-to-the-minute smart (based on context) traffic updates, route updates on directions, weather updates, etc.
Imp_SaveMT	Saving money transaction: The ability to receive smart discounts based on location (e.g., mobile coupons when walking into a store).
Imp_SaveML	Saving money life: The ability to earn savings on health, life, and car insurance based on living a healthy and safe lifestyle.
Imp_TaskMgm	Task Management: The ability to automate tasks or perform them instantly, such as placing an online order when something is running low or immediately adding something to a to-do list or calendar with voice requests or touch of a button.
Imp_DeviceSt	Device sturdiness: The ability not to worry about losing or damaging the device or having to recharge its battery.
Imp_Photo	Photos: The ability to take a picture when it would be annoying or impossible to have a phone open or with you (e.g., stopping while on a run).
Imp_Wellness	Well-being: The ability to receive subtle reminders and smart goals to sleep regularly, take enough steps each day, change position (not sit too much), and breathe deeply.

Imp_Athlete	Athlete: The ability to receive challenging fitness and athletic goals, smart coaching to improve performance (e.g., build to a faster 10-mile run), and multi-sport performance tracking (biking, running, swimming), as well as route mapping and guidance.
Imp_Style	Style: The ability to wear stylish, fashion-forward accessories that look great with many outfits.
WTP	Respondent's stated willingness-to-pay for a new watch with the features (s)he cares about. The exact question asked in the survey: *Imagine there is a new watch that leverages advances in several new technologies to offer the features you care about most. How much would you likely pay?*
iPhone	A dummy indicating whether the respondent owns an iPhone or other smartphone: 1 = iPhone 0 = other smartphone
CompBuy	A dummy indicating whether the company buys technology devices for the respondent. 1 = Yes 0 = No
Occupation	A variable indicating the respondent's field of work (multiple choice question). The variable is dummy-coded with *Other/family caretaker* as a reference category.
Occup_Health	Health services
Occup_Finc	Financial services
Occup_Sales	Sales
Occup_Advt	Advertising/public relations
Occup_Edu	Education
Occup_Cons	Construction/transportation/manufacturing/logistics
Occup_Eng	Engineering
Occup_Tech	Technology
Occup_Retail	Retailing/services/restaurant
Occup_SMB	Small-medium business/self-employed
Media Use	Dummy variables indicating whether the respondent frequently uses (i.e., checks/watches/reads/listens) the specific media channel. The exact question asked in the survey: *Do you check/watch/read/listen the following frequently (pick all that apply)?*
FB_Insta	Facebook/Instagram (1 = Yes, 0 = No)
Twit	Twitter (1 = Yes, 0 = No)
Snap	Snapchat (1 = Yes, 0 = No)

YouTube	YouTube/Netflix/Hulu (1 = Yes, 0 = No)
Pod_radio	Radio/podcasts (1 = Yes, 0 = No)
TV	TV (1 = Yes, 0 = No)
NewsP	Newspapers or magazines (1 = Yes, 0 = No)
AmznP	A dummy indicating whether the respondent has an Amazon Prime account 1 = Yes 0 = No
Age	A numeric variable indicating the respondent's age.
Female	A dummy indicating respondent's gender: 1 = female 0 = male
Degree	A variable describing respondent's highest level of education: 1 = Undergraduate degree 2 = Master's degree or higher
Income	A variable describing respondent's annual household income: 1 = < $40 000 2 = $40 000 - $70 000 3 = $71 000 – $100 000 4 = $101 000 - $175 000 5 = > $175 000

Tasks

1 **Segmentation (2.5-3 pages)**

1.1 Use cluster analysis to segment consumers based on their needs. Explain and argue for your choices.

- Which variables would you use as the basis for segmentation, i.e., input for your clustering? Which variables would serve as potential descriptors?
- What clustering method would you use?
- For how many distinct clusters do you opt?

1.2 Describe the resulting segments and give them meaningful names for ease of interpretation.

1.3 From what segment(s) of the market should Intel draw customers? Decide on meaningful criteria based on which Intel should decide on the segment(s) to target. Rate the segments based on these criteria on a 5-point scale and specify the segments you suggest Intel target and why.

2 **Targeting New Customers (1-1.5 pages)**

Build a classification model to target new customers. Think about:

- What information currently included in the survey can be easily obtained for new customers who didn't participate in the survey? Hence, which variables would you use as predictors in the model? Explain your choice and reasoning
- Which model do you opt for for classification and why?
- Present, critically assess, and discuss the results.

3 **Positioning and Reaching Target Customers (1-1.5 pages)**

Develop a positioning and targeting strategy for Intel:

- How can Intel position itself in these target segments?
- How can Intel reach the customers in the target segments?
- How and with which partners should Intel work more strongly in these target segments?