

COMMERCIAL ANALYTICS



TASK: ANALYSIS OF A HYPOTHETICAL FIELD DATASET

ANALYZING, UNDERSTANDING, & DRIVING CONSUMER BEHAVIOR



CONTEXT

A large retailer uses an interactive choice rack on which 21 luxury watches (7 columns x 3 rows) are presented to consumers. This device tracks shopper's product search so that every activity on this interactive choice rack is stored in a data base. Specifically, it tracks the type of watches shoppers are picking up from the device and the type of watch that inspected. The retailer tracks consumers actions in more than 80 stores.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

Abstract illustration of the rack device including position names.

KEY TASKS

The key task is to develop data-driven insights that help to better understand consumers behavior (what they are doing) and provide actionable advice on how to optimize the interactive shelf design from a company perspective. There are three main steps we want you to look into:

- "Clean" the dataset: Screen the dataset for irregular observations and decide how do you deal with them.
- Understanding: Test which factors influence how often a watch is picked up. In addition, test whether the positioning on the interactive shelf has an influence on consumer's product search (e.g., Do some positions, rows, and/ or columns that get more attention than others?)
- Recommendations: What should the business do next to optimize the interactive shelf design? (1 to max. 2 recommendation are sufficient)

DELIVERABLES

- Share the results of the above-mentioned tasks in a brief presentation (15 minutes). (No need to polish slides. We are only looking at the content.)
- Share the script of the data analysis (e.g., r script) used to clean and analyze the data.
- Expected Total Time Investment: 2-3 hours

TOOLS & RESSOURCES

- While we prefer you to use R or Python, you can use any tool for this task.
- Feel free reach out directly to maik.walter@sixt.com if you have any further question.

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DICTIONARY

- Client: Indicated the store.
- First Action: Time stamp of the first action of a user.
- Last Action: Time stamp of the last action of a user.
- Time: Time stamp when a specific action was done by a user.
- UserID: Indicates distinct users that used the device. The devices are setup so that a new user ID is automatically created when no action was done after 10s.
- UserAction: Type of action conducted by the user. Users could either pick up watches and/ or select multiple options on a touch screen.
 - 'liftup' is when a user picked up a product/ watch. When a watch is picked up, general product information will be shown on a touchscreen integrated in the device.
 - 'compare' is when a user picked up two products at the same time. The device will show technical and pricing details of both products on a touch screen.
 - 'details' is when a user picked up a watch and selected a button to get more technical information.
 - 'finance' is when a user picked up a watch and selected a button to get more pricing related information.
 - 'scrolling' is when a user scrolled up or down when viewing detailed technical or pricing information.
 - 'language' is when a user changed the language.
 - 'starttut_auto' is when the device starts a tutorial on how to use/ interact with the interactive rack device.
 - 'starttut_manuel' is when a user clicked a button to view a tutorial on how to use/ interact with the interactive rack device.
- ArtNr & ArtName: Indicates the specific produce
- Place: Indicates the position where a watch is located on the device. Visual layout provided on previous slide.
- Price: Price of the inspected watch.
- ShopType: Indicates the size of a shop with 'A' representing biggest stores and 'G' smallest.
- ActionInfo1: Detailed information the action that was conducted. For example, if a user compares two watches, the name of the 2nd watch will be shown here.
- CompareArtNr & ComparePlace: Atricle number and position on the rack of the 2nd watch that was picked up.