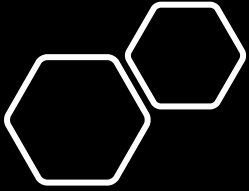# Bellabeat : How Can a Wellness Technology Company Play It Smart?

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Introduction

- Bellabeat, a health- focused smart products company was looking to use data on non- Bellabeat smart devices usage trend to plan on Bellabeat marketing strategy.

- To achieve this task, the analysis on fitness tracker dataset was perform to have a better understanding on smart device user's pattern.

- The analysed data was scrap from Kaggle user Mobius that is publicly available online. (https://www.kaggle.com/arashnic/fitbit)

- This data set contains personal fitness tracker from thirty-three Fitbit users that include minute-level output for physical activity, heart rate, and sleep monitoring. It also includes information about daily activity, steps, and heart rate that can be used to explore users' habits.
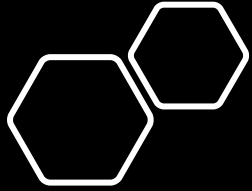
Project approach

The questions to be answered :
- What are some trends in smart device usage?
- How could these trends apply to Bellabeat customers?
- How could these trends help influence Bellabeat marketing strategy?

The process

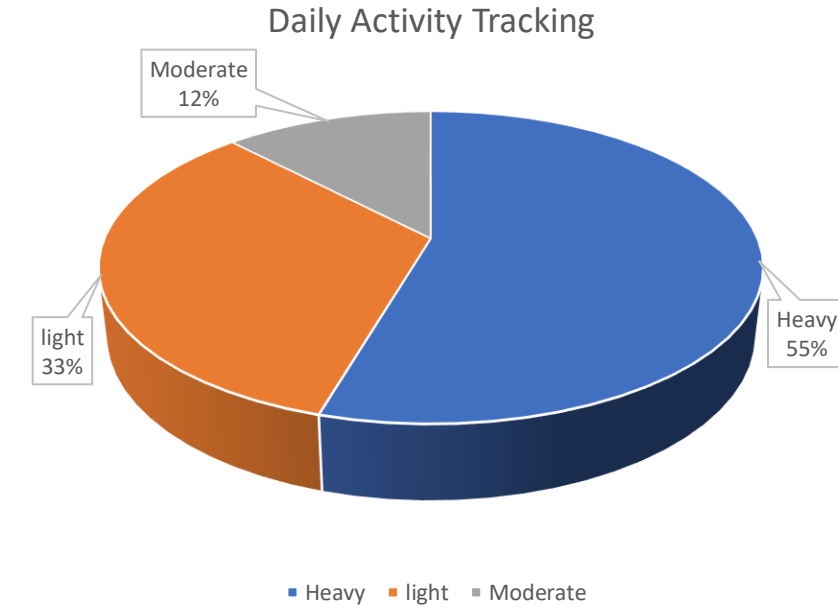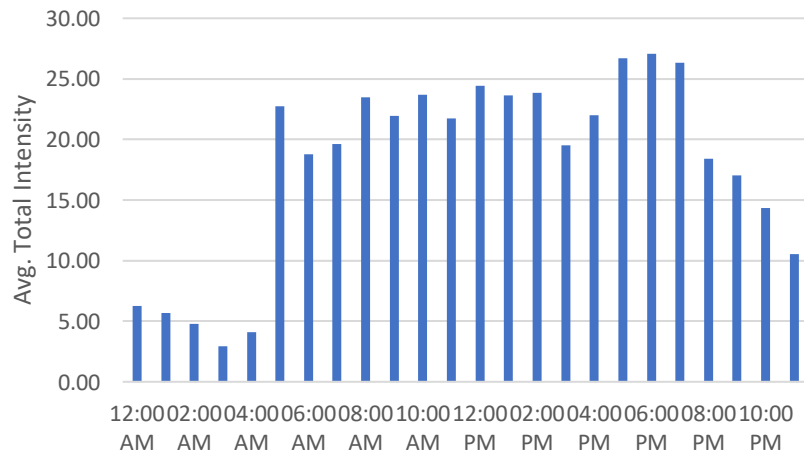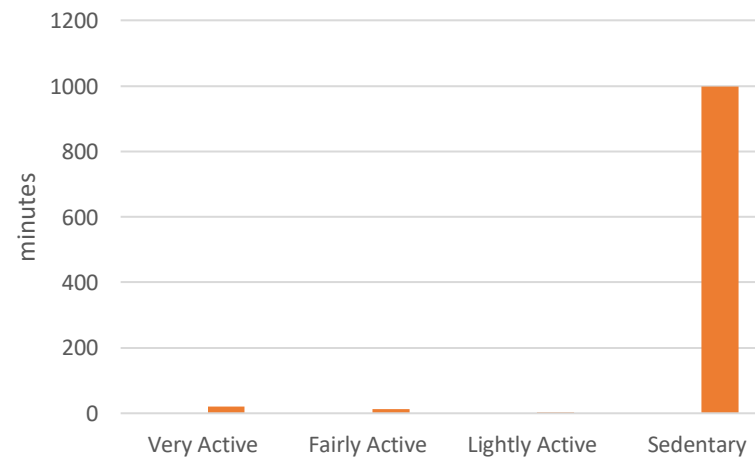| Data preparation	Statistical analysis	Visualization
• Data cleaning • Group and summarize similar data • Data sorting and filtering Tool used : Excel, MSSQL	• How much they use smart device in daily activities tracking • What is the active groups of smart devices users • Trends in daily activities Tool used : MSSQL, Excel	• Create a visualization to answer business task • Use visualization to create dashboard Tool used : Excel, Power BI

Results Analysis

- We can see that only 55% used their smart devices for activities tracking everyday while only 31% really used it for sleep tracking.

- The active minutes shows that users mostly in sedentary states, and most active hours is from 6.00 AM 7.00 PM with peak time at 5.00 PM to 7.00 PM.

- This indicates that most users most probably are the office workers that mostly sits and only done workout after office hours.

- Bellabeat should focus on the strategy to tackle this type of group users (office workers) and why they should choose Bellabeat smart devices.
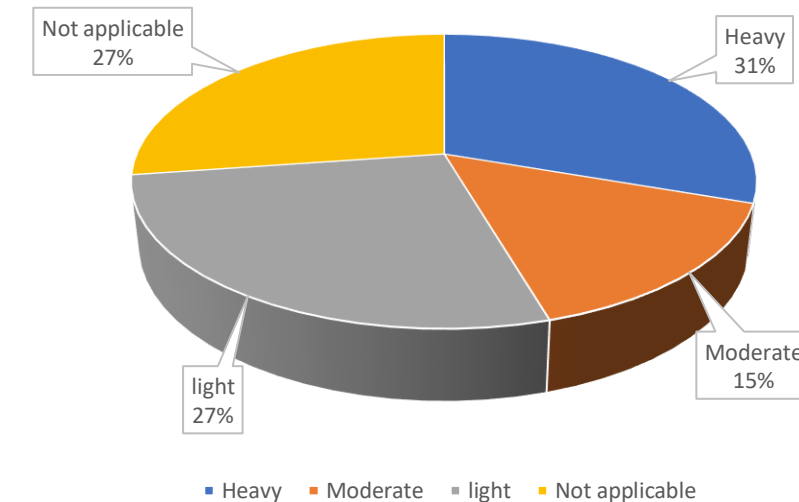
Daily Activity Tracking

Moderate 12%
light 33%
Heavy 55%

■ Heavy ■ light ■ Moderate

Sleep Tracking Usage Pattern

Not applicable 27%
Heavy 31%
Moderate 15%
light 27%

■ Heavy ■ Moderate ■ light ■ Not applicable

Daily Total Intensity

Avg. Total Intensity

30.00
25.00
20.00
15.00
10.00
5.00
0.00

12:00 AM 2:00 AM 4:00 AM 6:00 AM 8:00 AM 10:00 AM 12:00 PM 2:00 PM 4:00 PM 6:00 PM 8:00 PM 10:00 PM

Users Active Minutes

minutes

1200
1000
800
600
400
200
0

Very Active Fairly Active Lightly Active Sedentary

Results Analysis

- Users with less sedentary minutes get more sleep time and users who had more daily steps will likely have less daily sedentary minutes.

- The average daily steps is 7519 which is quite low compared to the recommended 10,000 steps daily by CDC.

- CDC also recommended daily sleeping hours for adults is 7 – 9 hours, and based on the data the users average sleeping hours is 6 hours which is lower than recommendation.

- Bellabeat should focus on this trend and promote a healthy lifestyle and how to achieved it with the help of its smart devices.

SedentaryMinutes and TotalMinutesAsleep

Daily Steps vs Sedentary minutes
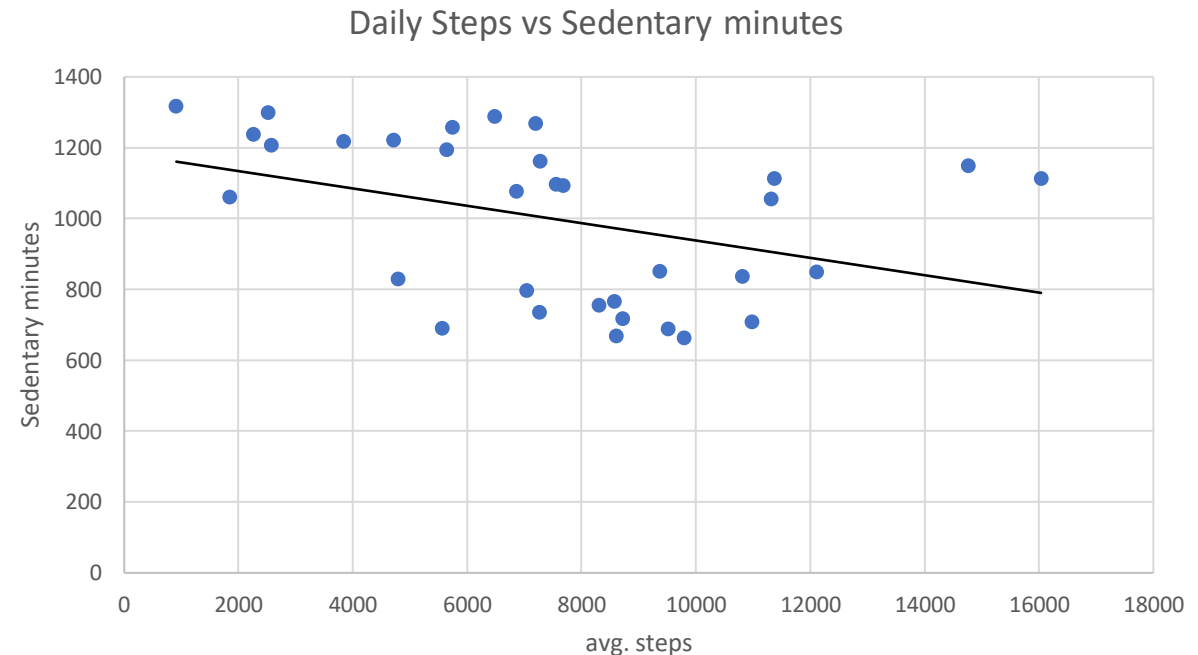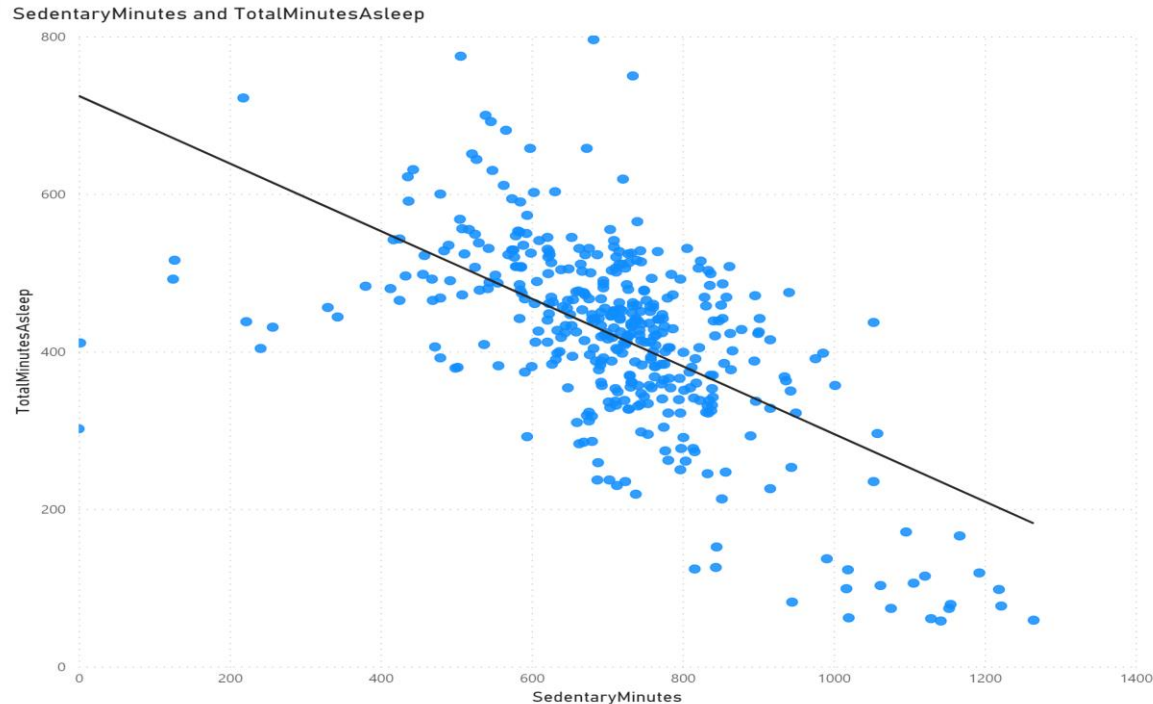
1. Less attractive Design and comfort

Hypothesis :

- Smart devices with less attractive design and comfort prevent users to use it daily

Data required :

- Form vs. function for smart devices preferences

Analysis next steps :

- Identify the factors for users in choosing smart device
- Is the tracking accuracy is very important in choosing the smart devices?

2. Low battery life

Hypothesis :

- Not every smart device users care to charge their devices everyday

Data required :

- Smart device battery capacity, battery technology (e.g. battery type, fast charging)
- Smart device battery life vs. functionality

Analysis next steps :

- Identify if there any different in battery life between smartwatch and fitness tracking
- Does users prefer fast charging with frequent charging time or long battery time but required battery change for a certain period?
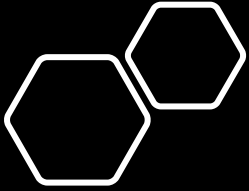
Recommendation

How can Bellabeat market their product?

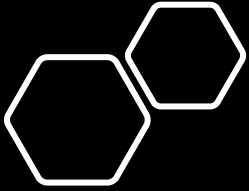**1. Promote Bellabeat smart device advantages for specific user group**

We can promote the aesthetic value of Bellabeat product especially to the women who not only have a career that needs style but at the same time care about their fitness.

2. Update the Bellabeat apps so it can be customize based on user preferences

Either self customize or pre- defined programmed, this apps can help to promote a healthy lifestyle that suites for everyone (e.g. students, full- time workers, athletes).

3. Identify the target user needs

Should Bellabeat improve the current function (e.g. higher accuracy, longer battery life) or add a new function (e.g. GPS tracking, heart rate).

Appendix

1. Data source : https://www.kaggle.com/arashnic/fitbit
2. SQL syntax : https://github.com/FirdausYusah/Bellabeat-case-study/blob/main/syntax