
CAPSTONE PROJECT - BELLABEAT

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OUTLINE

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Introduction

According to Forbes, “Bellabeat is a data-oriented wellness tech company that was founded by Sandro Mur, Urška Sršen, and Lovepreet Singh in 2013” (Robter, 2020). The company is global with offices in London, Hong Kong and Zagreb, but is headquartered in San Francisco. The company focuses on women's health and wellness with a collection of wearable and non-wearable tech. The four pillars of their brand include: smart insights, women-centric, holistic approach and body positivity. The company's wearable products include:

- ❖ Ivy – “a health tracker disguised as smart jewelry”
- ❖ Time – “an elegant hybrid wellness watch”
- ❖ Leaf – available in three styles: chakra, urban, & crystal and can be worn as a necklace, bracelet or clip. This was Bellabeat's classic wellness tracker.
- ❖ Spring – a “smart water bottle” designed to track your drinking / hydration habits.

All of the company's wearables sync to their Bellabeat app where members can check their metrics.



Business Task

Bellabeat is trying to expand their current customer reach and serve more people with their health devices and products.

Key stakeholders of this study are; Urška Sršen – Bellabeat's cofounder and Chief Creative Officer, Sando Mur – Mathematician and Bellabeat's cofounder Bellabeat's and its marketing analytics team – a team of data analyst

Task

Insight into ***“how consumers use non-Bellabeat smart devices and apply the insights gained in deciding how this can influence their marketing strategy and in turn bring about their growth”***

Data Preparation

The data source used for this case study is FitBit Fitness Tracker Data. The dataset was made available through Mobius.

Thirty eligible Fitbit users consented to the submission of personal tracker data, including minute-level output for physical activity, heart rate, and sleep monitoring. It includes information about daily, hourly activities, steps, and heart rate that can be used to explore users' habits and patterns.

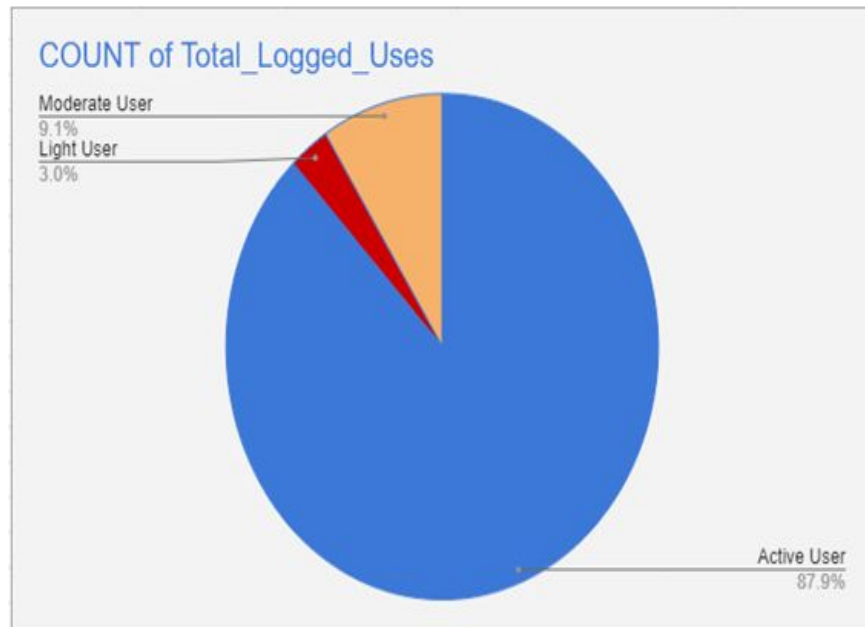
Data used is easily accessible, based on its metadata, its open source and can be copied, modified and distributed freely without permission hurdles.

Analysis

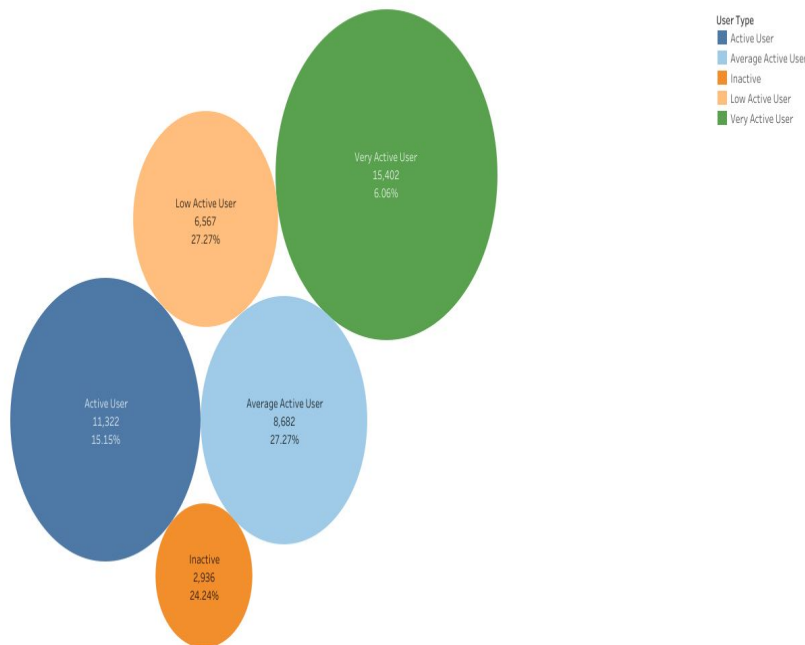
The first step of analysis was to confirm the number of times each user wore/used FitBit tracker in the month under review

A group metric was created to categorize users from active to light users using the metric below:

- Active User - wore their tracker for 25-31 days
- Moderate User - wore their tracker for 15-24 days
- Light User - wore their tracker for 0 to 14 days



Active usertype by Average Total steps by Percentage of users



To get more insights from the dataset, analysis was done on users based on active steps by the category below:

Inactive: less than 5,000 steps per day

Average (somewhat active): ranges from 7,500 to 9,999 steps per day

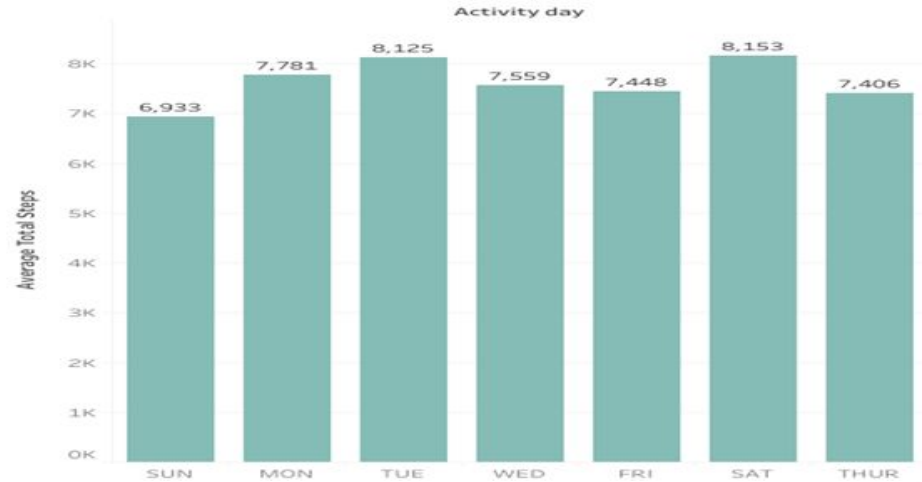
Very Active: more than 12,500 steps per day

Low Active User: 5,000 to 7,499 steps

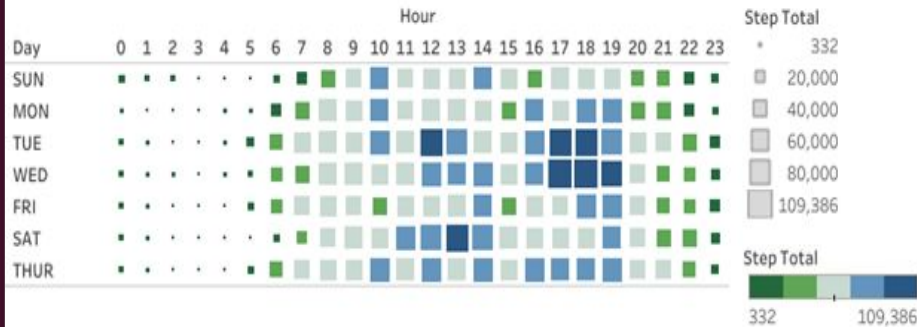
Active User: 10,000 to 12,499 steps will be accounted for).

It can be inferred that users were more active following Sunday rest and Saturday being the first full day of the weekend, giving time for more activities and engagement.

Weekday Activity by Total steps

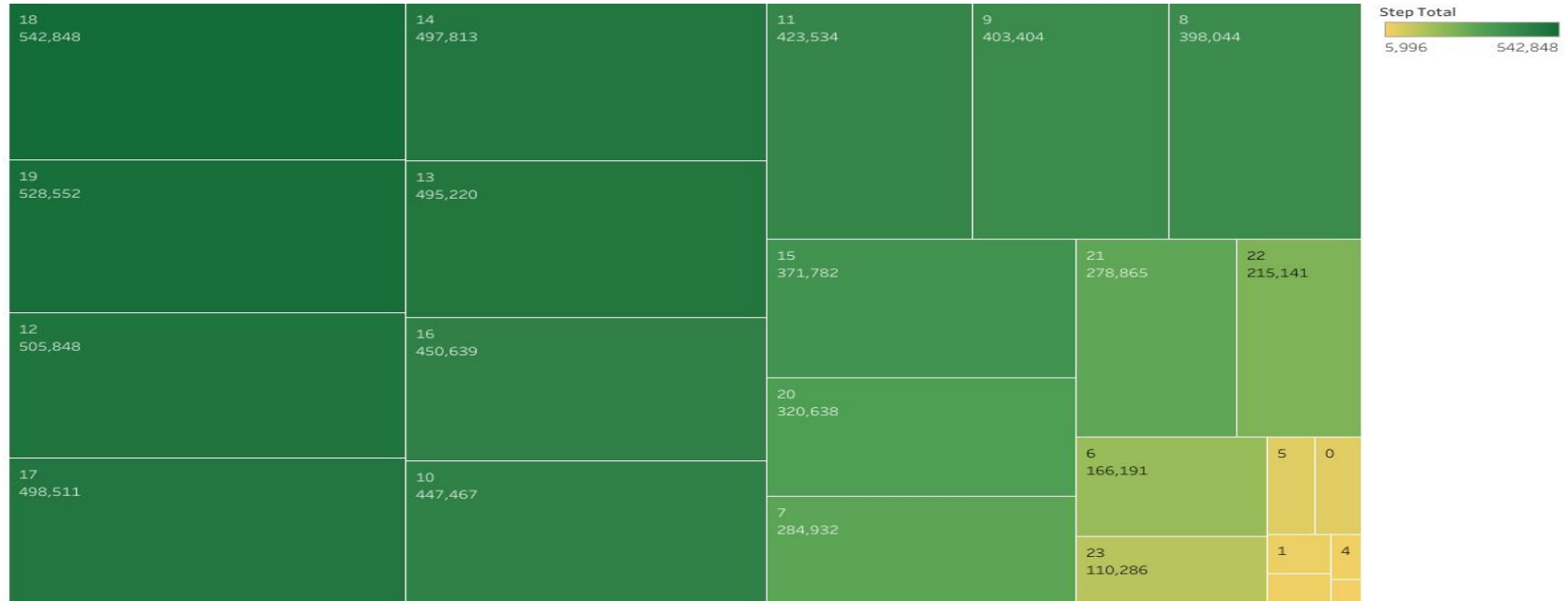


Total steps by Weekday by Hour



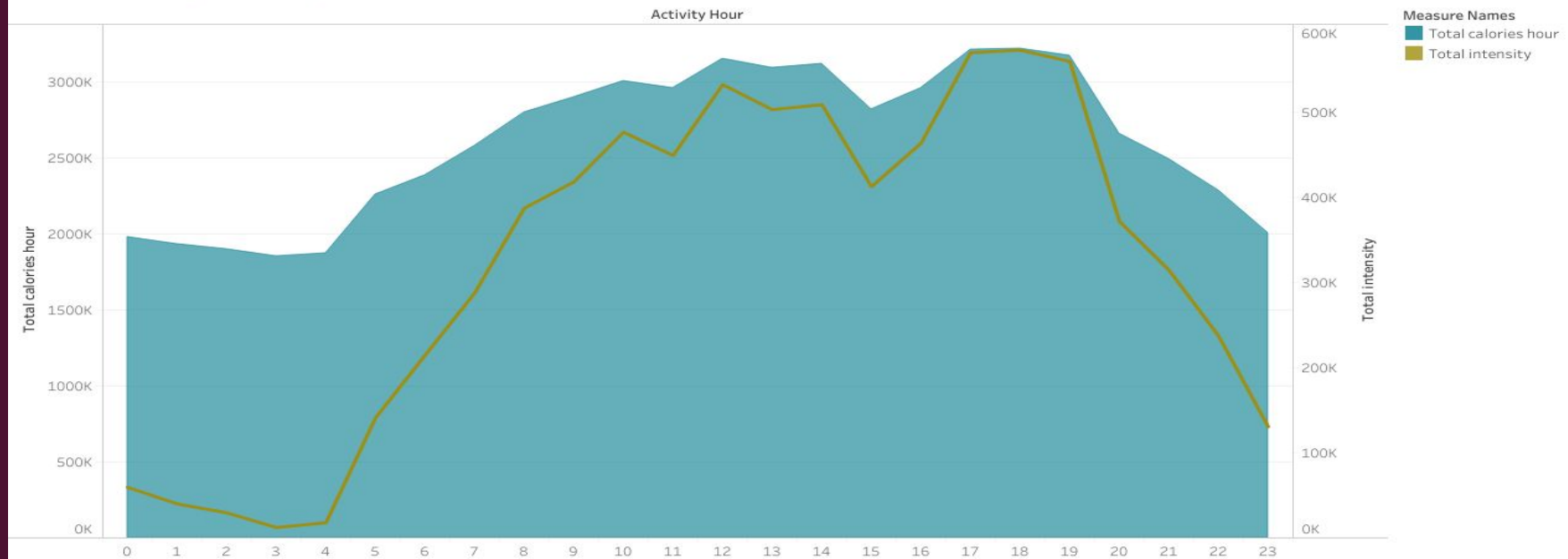
From the image by the left, we can conclude that users were most active weekday and their step count by the hour increased as the day progressed and declined towards close of day.

Total steps by Hour



From the result we can deduce that users were more active between the hours of 12:00 – 19:00 based on their total steps count. It can be inferred that users were more active during the day which is the activity peak period for most people with room for activities and engagements that would naturally impact total steps for the day

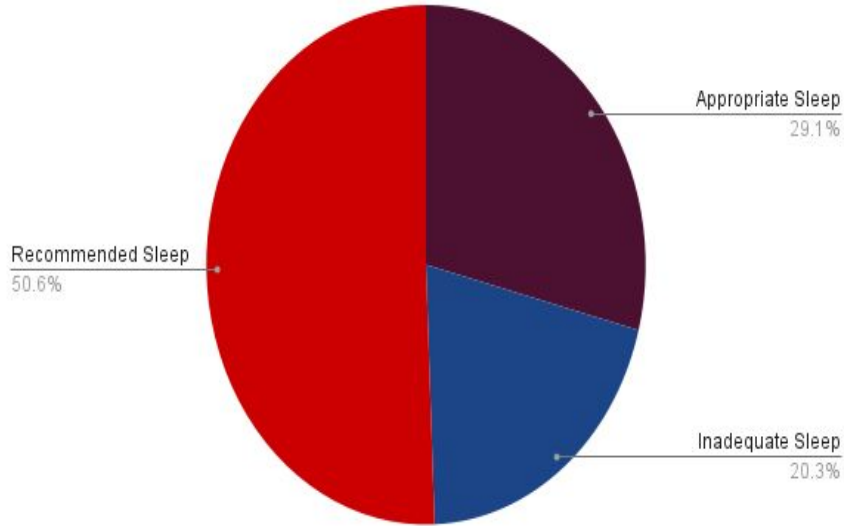
Total calories by intensity per hour



To get insight from calories data provided, we checked the relationship between calories burnt and the force exerted (intensity – which is the measurable amount of effort exerted in doing a task) in the course of the day, we checked total calories by total intensity by the hour of the day.

The trend between the calories burnt and the intensity throughout the day are similar. They both dip and rise around the same hours throughout the day

SUM of avg_Total_Minutes_Asleep



According to the article “**How sleep works**” by **Eric Suni, Staff Writer** and medically reviewed by **Dr. Abhinav Singh**, Sleep Physician, the following sleep recommendation guide was quoted:

Recommended Sleep: Between 420 minutes (7 hours) and 540 minutes (9 hours).

Appropriate Sleep: Between 360 minutes (6 hours) and 420 minutes (7 hours) or sleep greater than 540 minutes (9 hours).

Inadequate Sleep: Sleep less than 360 minutes (6 hours).

The results on the “Sleep Chart” showed that 50.6% of the participants got the recommended amount of sleep, while 29% got the appropriate amount of sleep and 20.3% got an inadequate amount of sleep on a daily basis. Lack of sleep leads to more stress which means users with inadequate sleep have a higher stress level.

— Conclusion

Bellabeats' focus is mainly on women's health and despite the dataset provided being silent on demographic information, analysis was carried out based on the sampling bias but recommendation to the team will be to engage a larger audience of users that will create large data set and also include demographic information in the survey distributed for more robust insight to users data.

Recent data should also be used to reflect current and recent trend of customers' interaction with bellabeats devices as data provided was dated 2016, 6 years back.

Recommendations

A survey to ascertain users are familiar with the weight and heart rate function can be distributed while a short captivating video explaining how these functions work can be used as an advert to get more users informed.

To the users of Bellabeat, a push notification can be sent to active users particularly between the hours of 12-19hr which is the most active window based on analysis and a 'great job' motivation alert as reward for reminding other users around them to get active.

To engage more users, reminders at different time of the day such as 'take a walk', 'move', 'complete your steps for today' should be added to the app as this can spur users to increase their daily steps and meet up with the daily requirement of 10,000 steps

Recommendations

Bellabeat should include daily meal and snack ideas for lunch which is within the most active window so users can remember to log their calorie data while staying healthy.

The daily calorie requirement can also be included so users are sure they do not consume more/less.

Notifications should be sent to users from a particular time (22:00hr preferably) at intervals of 15 minutes to remind them to go to bed early so they can get adequate sleep.

A push notification should go out at different times of the day reminding user to take a walk, stretch, or engage in a few minutes of yoga to efficiently reduce sedentary time and increase activity and sleep time.

THANK YOU