Bellabeat Case Study

Bhavika Gandhi

Illustration by Marina Green from Ouch!

Introduction

Bellabeat is a high-tech manufacturer that makes goods for women that are health-focused. Bellabeat, a 2014 startup, is the firm behind one of the first wearables made just for women. Since then, it has expanded to include a range of digital goods for monitoring and enhancing women's health.

Picture credit- Bellabeat

Phases

Ask
Business Task and Key Stakeholders

Prepare
Understanding data and its organization

Process
Cleaning and transformation of data

Analyze
Analyze the data to find any patterns, trends…

Share
Share the results and strategic suggestons

Phase

Phase 1

Ask

Scenario

Although Bellabeat is a profitable business, they might have more influence in the worldwide smart device industry. For that, Bellabeat's cofounder and chief creative officer, Urška Sršen, thinks the company may be able to find new growth prospects through the analysis of fitness data from smart devices.

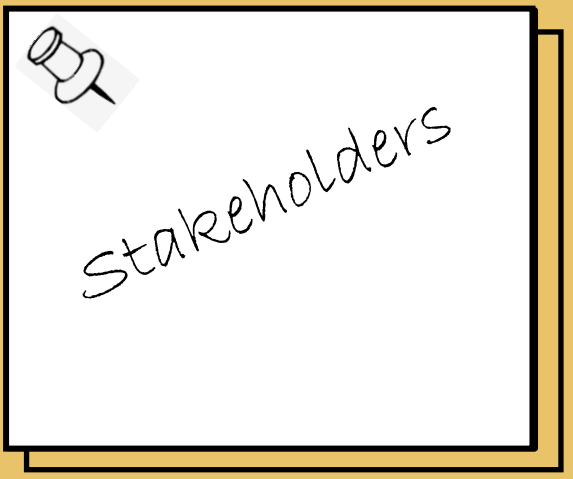
Phase 1

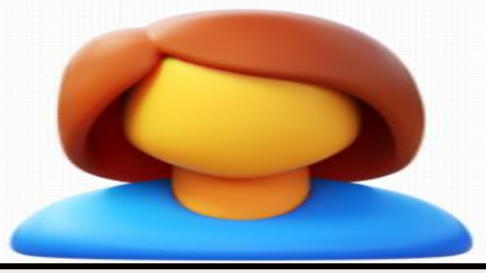
Ask

Meet the Stakeholders

Business Task

Explore current smart device usage patterns to inform Bellabeat's marketing strategy. Analyze data to understand user behaviors and preferences, providing insights for targeted approaches. Craft suggestions aligned with observed trends, enhancing Bellabeat's outreach and facilitating company expansion. Leverage market insights to refine marketing efforts and capitalize on emerging opportunities, ensuring Bellabeat remains at the forefront of innovation in the rapidly evolving smart device landscape..





Urška Sršen

Cofounder and Chief Creative Officer, Bellabeat

Image Credit

Sando Mur

Mathematician and Bellabeat's cofounder

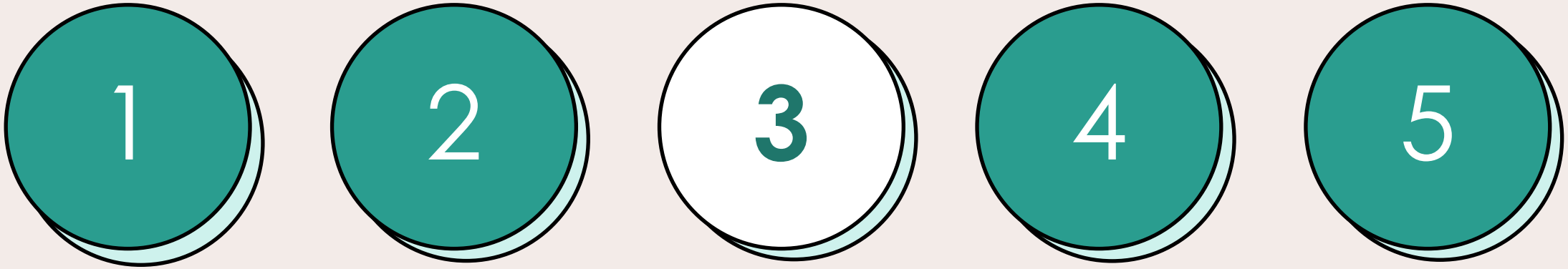
Image Credit

Phase

Data & Its Organization

Data Source	Organization	Format	ROCCC
FitBit Fitness Tracker Data, which is kept on Kaggle and made available through Mobius, is the data set provided to us	18 CSV files containing data like: Calories burned Active minutes Heart rate Sleep data, etc.	Long format because a user's data is stored across multiple rows, where each row shows a user's data at a moment, a specific instance of time	ROCCC method to check for bias and credibility. R (Reliable, completeness) ↓ O (Originality) ↓ C (Comprehensive) → C (Current data) ↓ C (Cited) ↑

Phase



Phase 3

Process

Data processing to ensure its integrity:

1 Date string conversion- Dates across all files are in mixed format. All dates and times now formatted into dd-mm-yyyy hh:mm format. Also, original dates have been interpreted as follows:

Eg. 04-12-2016 → 12-04-2016

4/13/2016 → 13-04-2016

2 User identification- Unique user ids have been determined using SQL query for all files. Most files have 30-33 users.

3 Two files removed- Heartrate_seconds_merged and weightLogInfo_merged removed from analysis due to very small sample data size (7 and 8 users respectively)

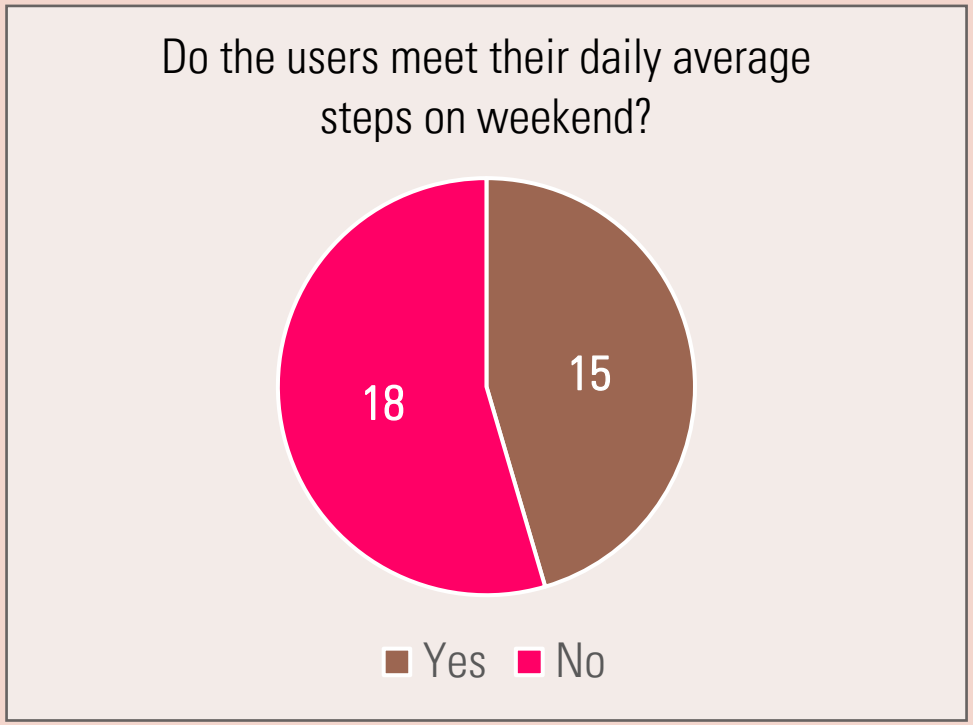
4- New tables created- Created new version v02 for dailyCalories_merged, dailyActive_merged and sleep_day tables with an additional column day_of_week

Phase

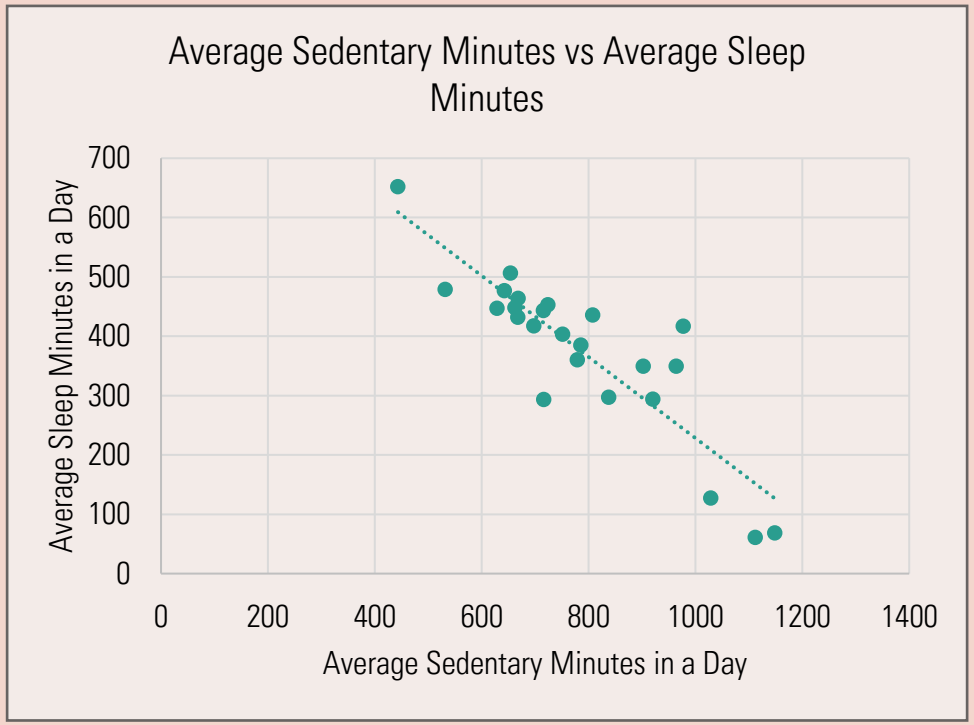
Phase 4

Analyze

1 Average steps on Weekdays vs Weekend



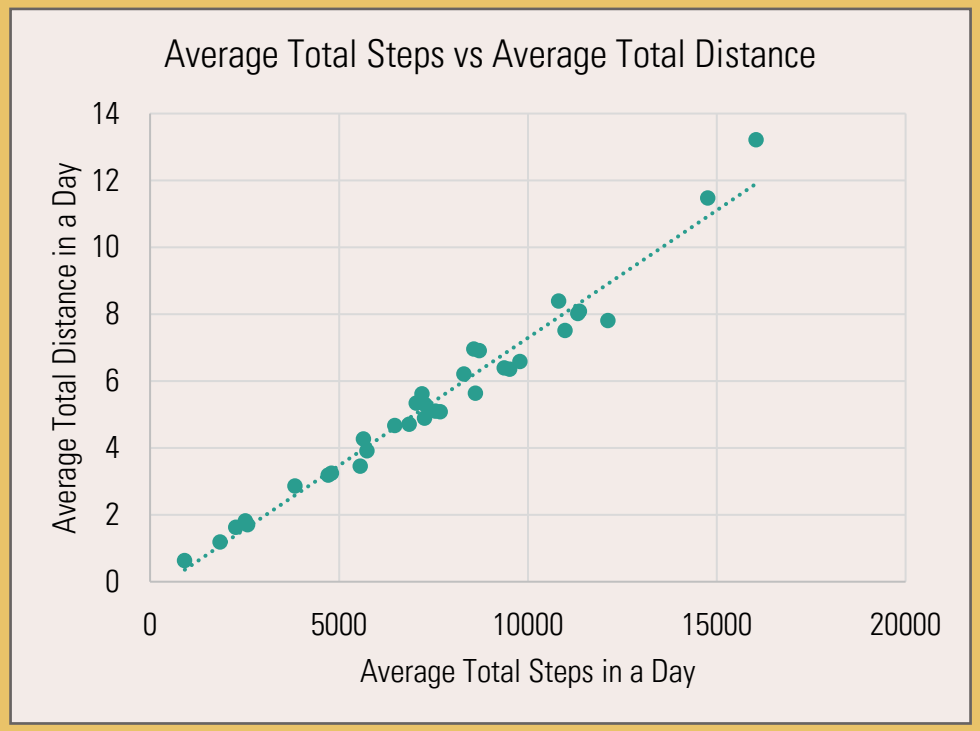
2 Average sedentary minutes vs average sleep minutes



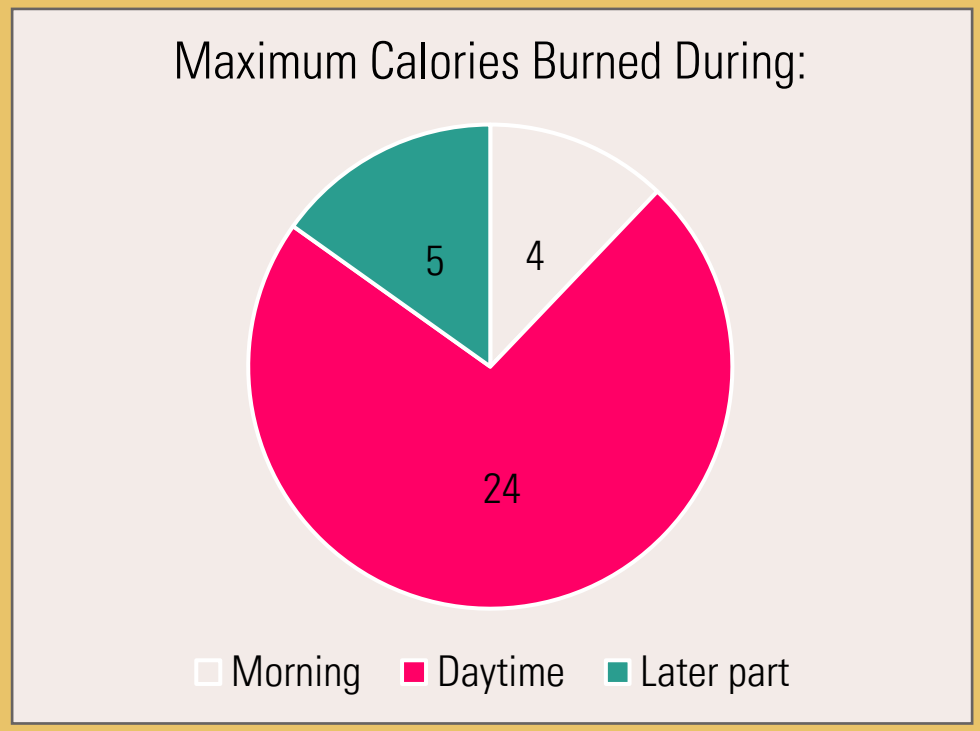
Phase 4

Analyze

3 Average Total Steps vs Average Total Distance



4 Day-period wise Calories Burned



Phase

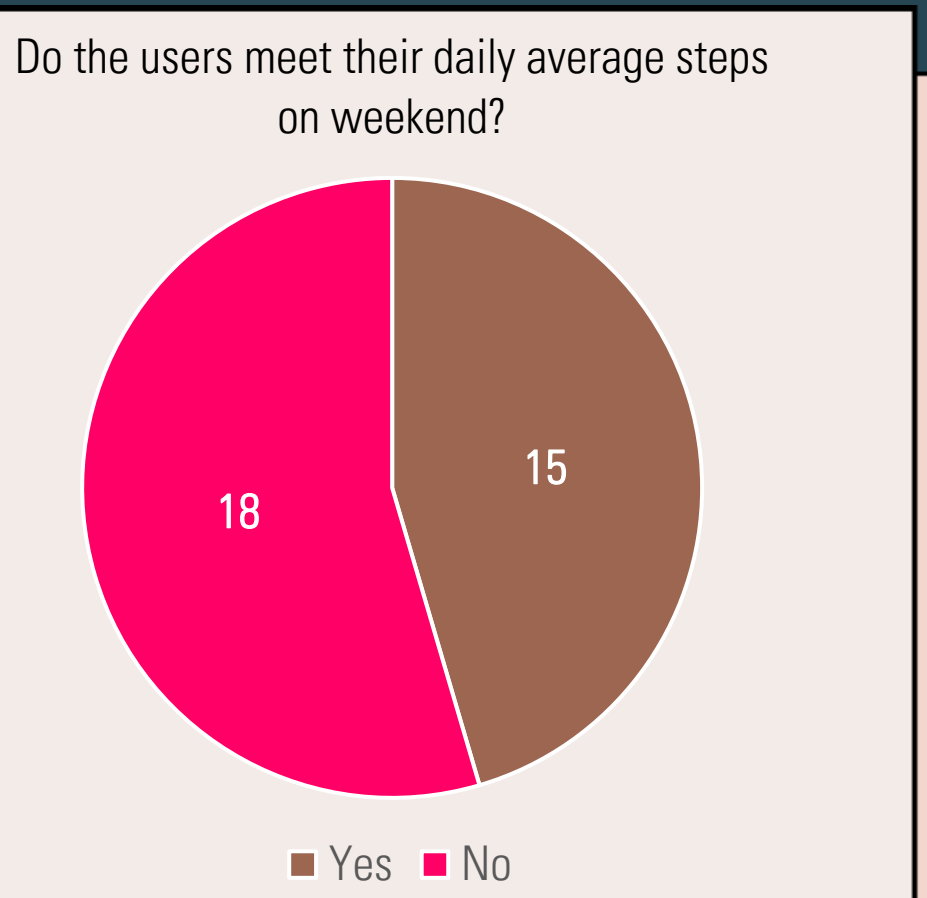
Ask Prepare Process Analyze Share

Phase 5

Share

Suggestion 1- Daily steps goal reminder

The number of individuals taking a higher average number of steps on weekends compared to weekdays is approximately equal. To encourage individuals to consistently meet or exceed their daily average step count, consider sending them notifications highlighting their accomplishments and milestones. Additionally, implementing a dedicated weekday leaderboard could serve as a motivating tool, inspiring individuals to strive for their step goals during the workweek

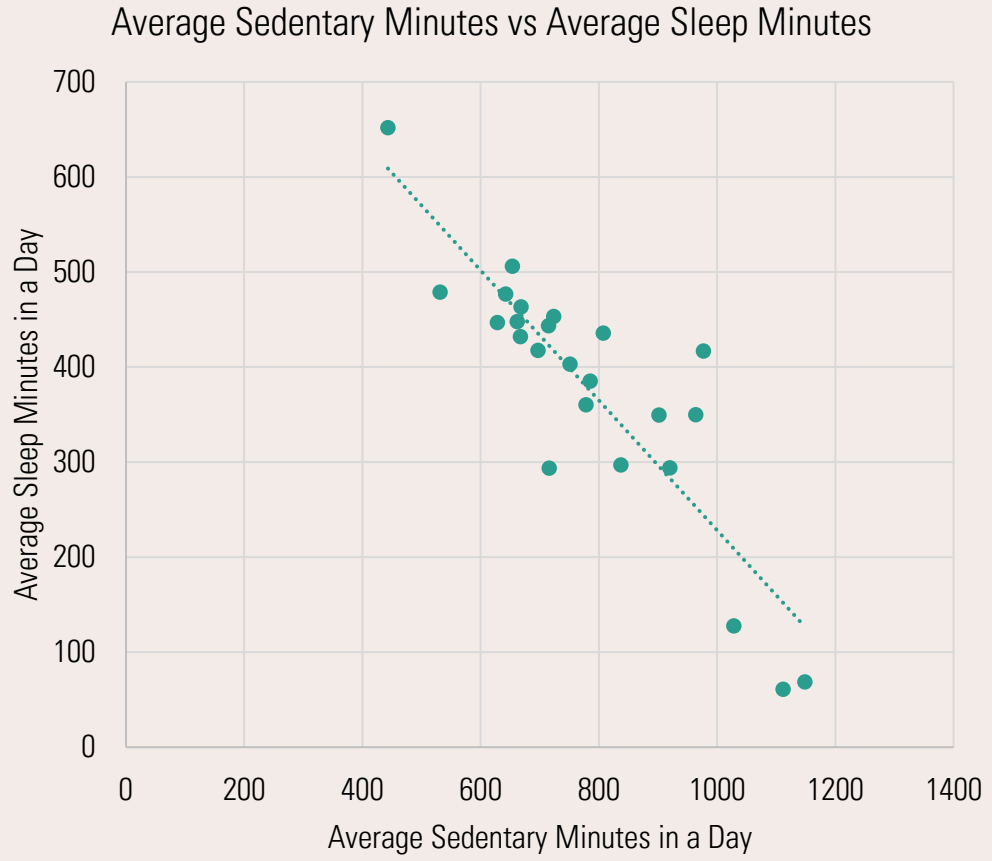


Phase 5

Share

Suggestion 2- Sleep reminder

The graph unmistakably illustrates a direct correlation between a more sedentary lifestyle and poorer sleep quality. To address this, consider integrating a sleep reminder into the app that notifies users to retire to bed on time, aiming for a minimum of 7-8 hours of sleep. Ensuring an adequate duration of rest not only enhances overall sleep quality but also promotes bodily rejuvenation, enabling individuals to stay energized for the challenges of the upcoming day.

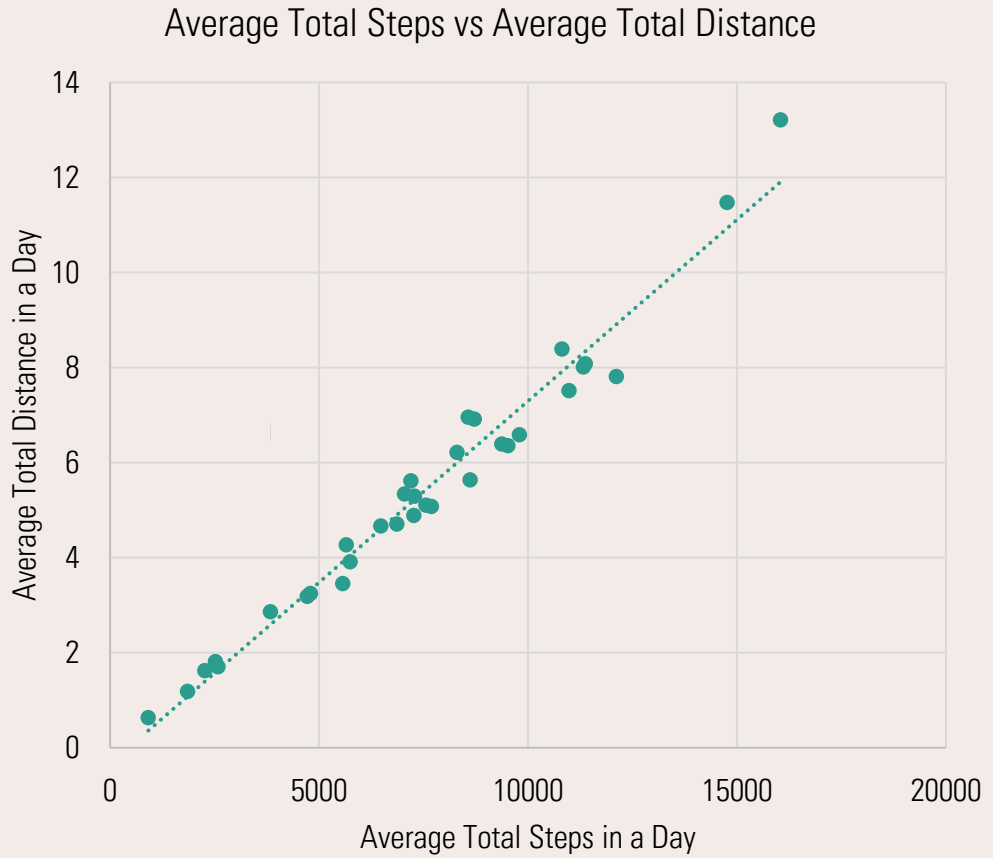


Phase 5

Share

Suggestion 3- Daily distance goal reminder

As anticipated, the graph illustrates a direct correlation between the number of steps taken and the distance covered. This implies that, much like prompting a user to achieve their daily step goal, it is equally important to encourage individuals to cover at least the minimum required distance to maintain fitness.

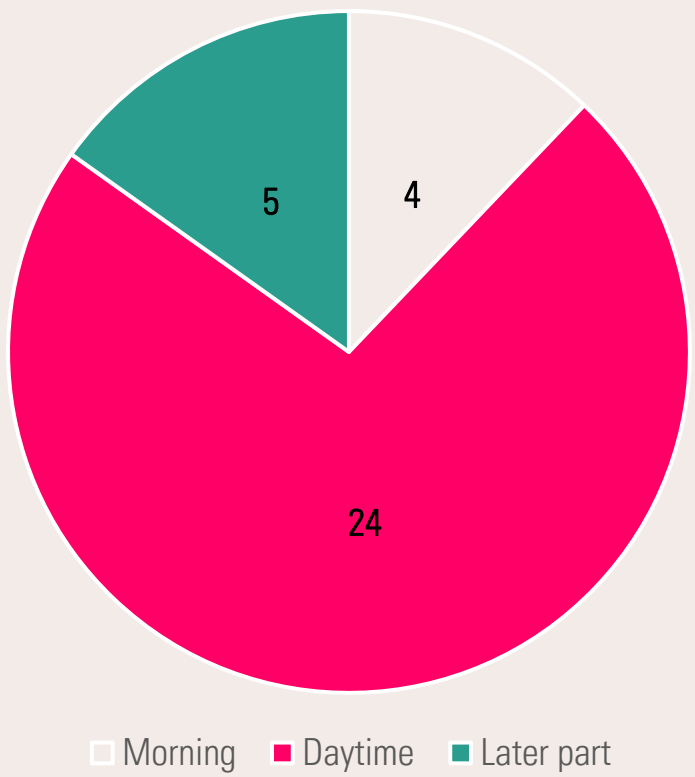


Phase 5

Share

Suggestion 4- Day period wise reminder

Since in the later part of the day most users burn less number of calories than usual, the fitness tracker can send some friendly reminders periodically to prompt the user to not sit for too long- maybe just walk for a minute here and there so that the sedentary minutes are reduced and the body is (almost) always in motion, even if it's a leisurely stroll!



Picture credit- Bellabeat

Summary

This case study is a capstone project and a part of Google Data Analytics Course program. Here, I got to learn the basics of data analytics and how it is used in the real- world. I got to use and learn about some amazing tools like Excel, SQL, Power BI, etc. Overall, it was a good experience. I applied the new skills learned in this project.

Your thoughts and suggestions will be much appreciated! ☺

Thank you

Bhavika Gandhi

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