Informed Marketing Strategy for Bellabeat

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Last Updated: March 2022

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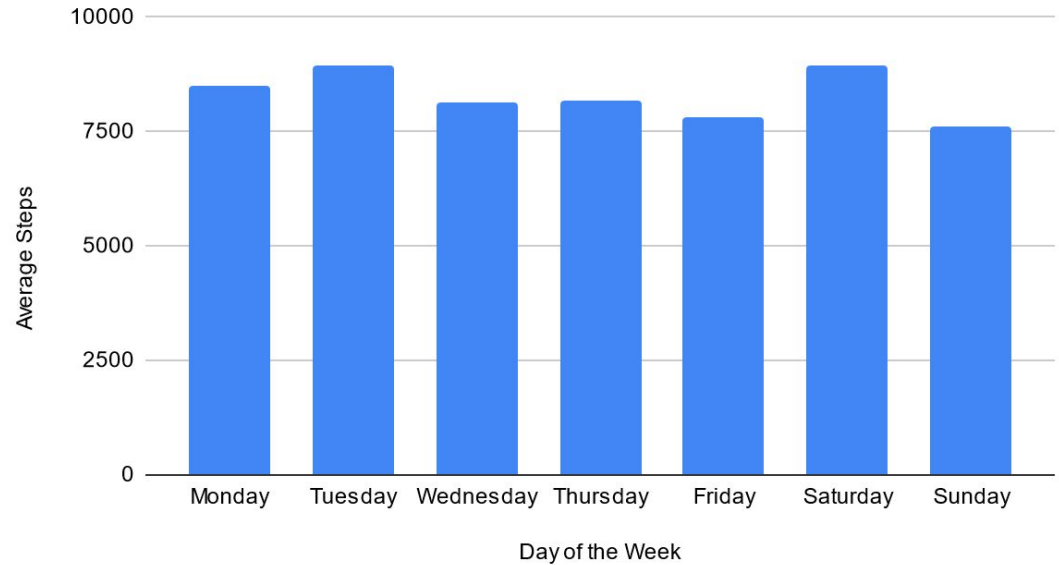
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Goals

Goals of this analysis

- Observe trends about how consumers are using their smart devices

- Use these trends to help guide marketing strategy for Leaf, Bellabeat's classic wellness tracker
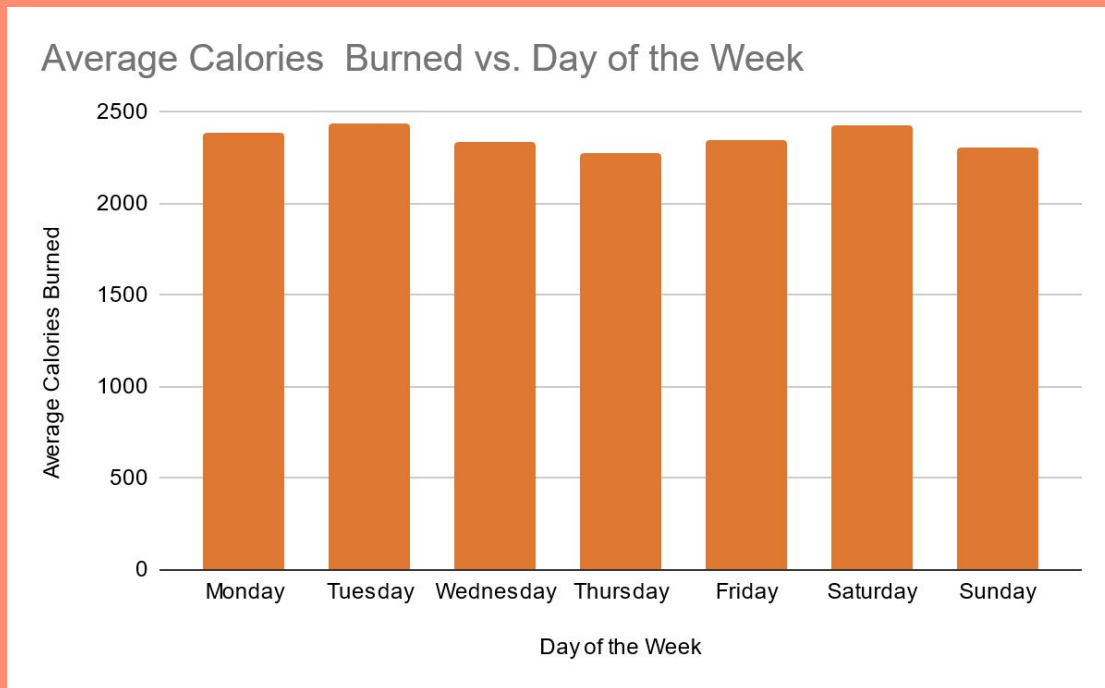
Trends

Steps

- Most steps taken occur on Tuesdays and Saturdays

- The difference between days is minimal

Average Steps vs. Day of the Week

Calories

- Most calories burned occur on Tuesdays and Saturdays

- The difference between days is minimal

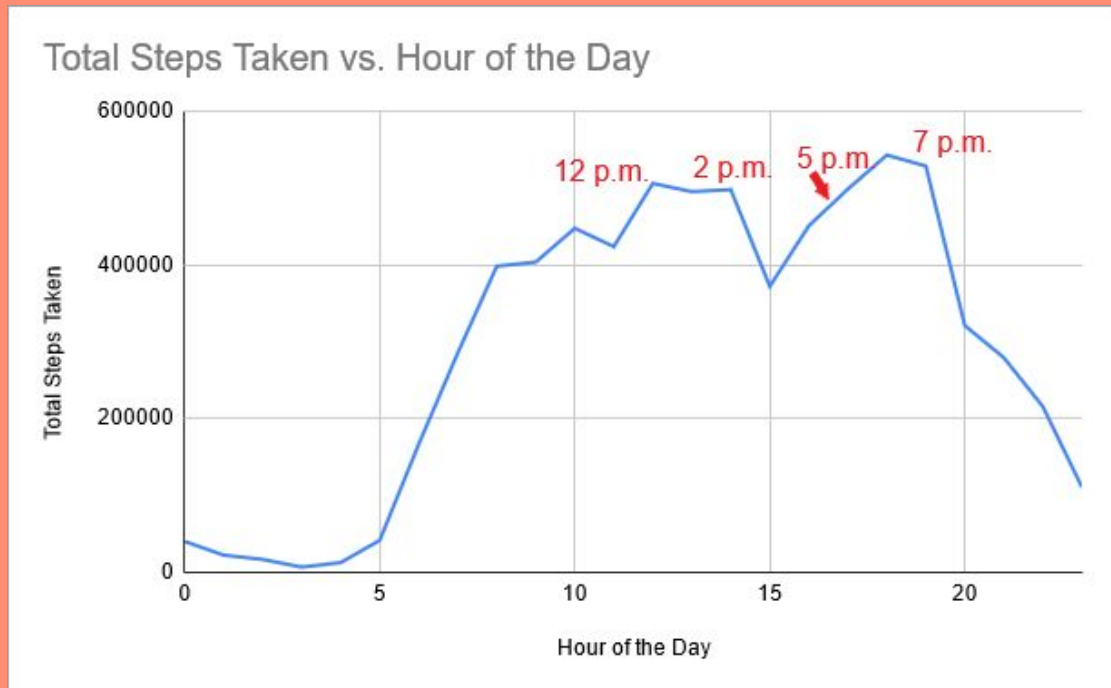- Calories burned and steps taken appear to be correlated

Average Calories Burned vs. Day of the Week

Steps

- Most steps are taken between the times of:

  12 p.m. - 2 p.m.

  5 p.m. - 7 p.m.

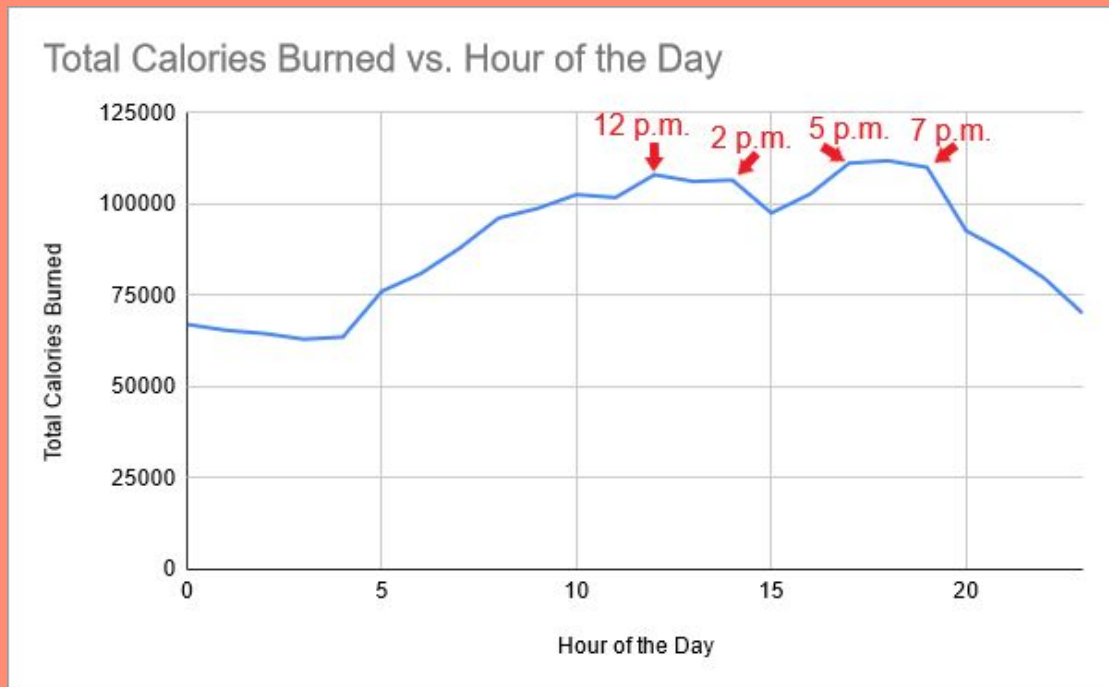Total Steps Taken vs. Hour of the Day

Calories

- Most calories are burned between the times of:

  12 p.m. - 2 p.m.

  5 p.m. - 7 p.m.

- Calories burned and steps taken appear to be correlated

Total Calories Burned vs. Hour of the Day

12 p.m.   2 p.m.   5 p.m.   7 p.m.

Sleep

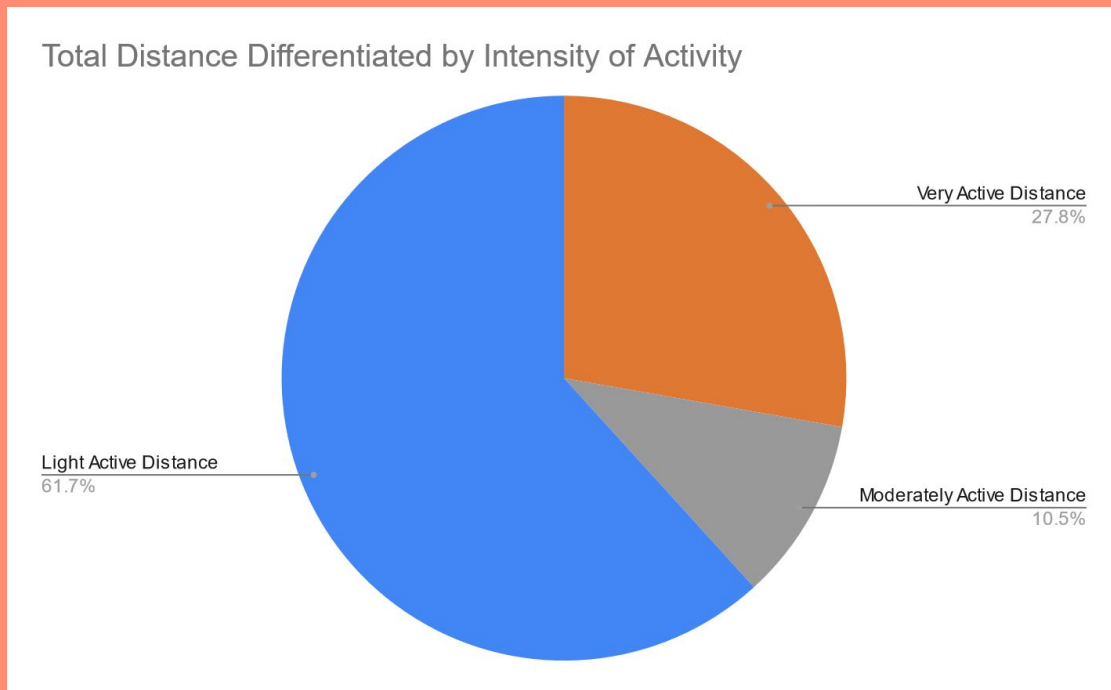- The average fitbit user takes 39 minutes to fall asleep

- It takes fitbit users the most time to fall asleep on Sunday

Average Time Asleep and Average Time in Bed
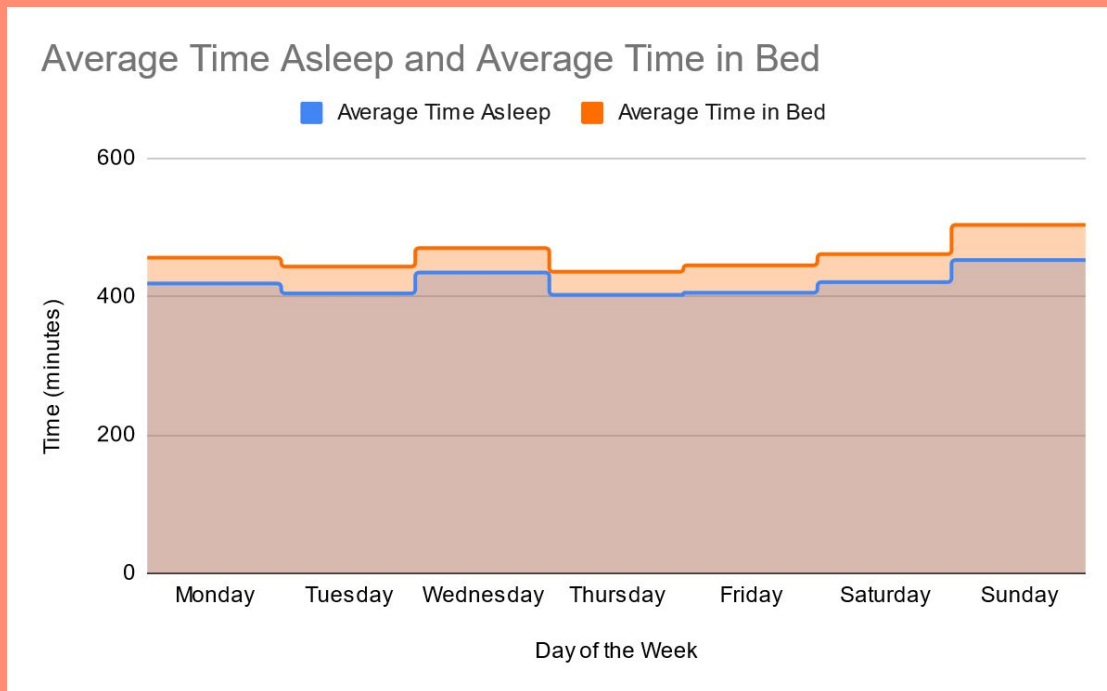
Activity

- Over 60% of Active Distance tracked is "Light"

Total Distance Differentiated by Intensity of Activity

Very Active Distance
27.8%

Moderately Active Distance
10.5%

Light Active Distance
61.7%

Marketing Strategies

Marketing Strategies

1. Bellabeat could create social media posts on Facebook and Instagram prior to higher activity times (10 a.m. - 12 p.m. and 3 p.m. - 5 p.m.) highlighting how Leaf by Bellabeat can empower women with the knowledge of statistics about their health and habits.

Marketing Strategies

2. Bellabeat could run video ads on Youtube and digital ads on the Google Display Network when users are typically more sedentary (Sundays and Fridays) to reach a wider audience about the advantages of tracking health and habits with Leaf by Bellabeat.

Marketing Strategies

3. Bellabeat could invest in a new marketing strategy called Bellabeat Health. Bellabeat Health would showcase articles written by Bellabeat Health experts that would, for example, encourage increased sleep hygiene. These articles would be written for current users of Leaf by Bellabeat as well as prospective users of Leaf by Bellabeat who would benefit from knowledge of their sleeping habits. Considering this example, this particular article could be released the day where users of fitbit devices usually have the most trouble falling asleep (Sunday).

Marketing Strategies

4. Another Bellabeat Health article could inform prospective Bellabeat tracking device users about the benefits of wearing Leaf by Bellabeat throughout the day doing typical activities, since more than 60% of total Activity Distance tracked is made up of 'Light Activity.' This article could highlight the empowering knowledge of being able to track and improve your own health and habit statistics.

Appendix

Sources

- Furberg, R., Brinton, J., Keating, M., & Ortiz, A. (2016). Crowd-sourced Fitbit datasets 03.12.2016-05.12.2016 [Data set]. Zenodo. https://doi.org/10.5281/zenodo.53894

- Möbius. (2016). FitBit Fitness Tracker Data [Data set]. Kaggle. https://www.kaggle.com/arashnic/fitbit

Programs used

- Google BigQuery Cloud
- Google Sheets
- Google Slides
- Google Docs
- Paint 3D

Cleaning

- For datasets that included "A.M." or "P.M." I adjusted the format to Date time in Google Sheets and saved them to perform analysis in Google BigQuery.

- For the Average Steps and Calories vs. Day of the Week analysis I removed entries where fitbit users walked 0 steps indicating days where fitbit users were not wearing their trackers. I did this to find accurate step and calorie averages which would have been affected by 0 values.

Limitation

- This analysis is based on a small data set that uses fitbit activity from 30 users. A larger dataset would be beneficial for future studies.

Queries Used

```
SELECT
    DISTINCT(EXTRACT(HOUR FROM ActivityHour)) AS hour,
    SUM(StepTotal) AS steps
 FROM `focused-premise-342021.PROJECT.hourlysteps_merged`
    GROUP BY hour
    ORDER BY hour


SELECT
    SUM(VeryActiveDistance) AS very_active_distance,
    SUM(ModeratelyActiveDistance) AS moderately_active_distance,
    SUM(LightActiveDistance) AS light_active_distance
FROM `focused-premise-342021.PROJECT.dailyactivity_merged`
    WHERE TotalSteps > 0


SELECT
    DISTINCT(EXTRACT(HOUR FROM ActivityHour)) AS hour,
    SUM(Calories) AS calories_burned
 FROM `focused-premise-342021.PROJECT.hourlycalories_merged`
    GROUP BY hour
    ORDER BY hour
```

```
SELECT DISTINCT(EXTRACT(DAYOFWEEK from ActivityDate)) AS day_of_week,
    AVG(TotalSteps) AS step_average,
    AVG(Calories) AS calories
FROM `focused-premise-342021.PROJECT.dailyactivity_merged`
    WHERE TotalSteps > 0
    GROUP BY day_of_week
    ORDER BY step_average DESC


SELECT DISTINCT(EXTRACT(DATE FROM SleepDay)) AS day,
    AVG(TotalMinutesAsleep) AS average_time_asleep,
    AVG(TotalTimeInBed) AS average_time_in_bed,
 FROM `focused-premise-342021.PROJECT.sleepday_merged`
    GROUP BY day
    ORDER BY day


SELECT DISTINCT(EXTRACT(DAYOFWEEK FROM SleepDay)) AS day,
    AVG(TotalMinutesAsleep) AS average_time_asleep,
    AVG(TotalTimeInBed) AS average_time_in_bed,
 FROM `focused-premise-342021.PROJECT.sleepday_merged`
    GROUP BY day
    ORDER BY day
```