# BELLABEAT DATA ANALYSIS PROJECT

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# OUTLINE

1. About Company
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3. Introduction
4. Methodology
5. Result
   - Visualization - Chart
   - Dashboard
6. Discussion

# ABOUT COMPANY

Bellabeat is a high-tech manufacturer of health-focused products for women was founded by Sandro Mur, Urška Sršen, and Lovepreet Singh in 2013.

The four pillars of their brand include: smart insights, women-centric, holistic approach and body positivity. Collecting data on activity, sleep, stress, and reproductive health has allowed Bellabeat to empower women with knowledge about their own health and habits and that “through tracking your body’s bio-responses and aligning that data with your hormonal cycle, you’ll always know why you feel how you do.”

Website: Bellabeat

# EXECUTIVE SUMMARY

1. 87,88% of the users use their device 25 – 31 days, but only 50,85% of users wear device all day
   → Continue promote Bellabeat's product features.
2. We will categorize user into 4 groups using Active Minutes metric: Very(33,33%) , Fairly (24,24%), Lightly (24,24%) and Sedentary (18,18%**).** The more physical activity you do, the more calories you burn
   → Motivate users to be more active by pushing notifications or posts on the Bellabeat app.
3. Users take about an average of 7,500 steps per day, CDC recommends 8000 steps per day. Users are most active between 8 a.m to 7 p.m, especially from 12 p.m to 2 p.m and 5 p.m to 7 p.m.
   → We can encourage users by sending notifications and using the Rewards System based amount of steps walked every day
4. Users sleep between 6,5 and 7 hours a day. According to CDC (link), we need 7 to 8 hours of sleep a day. Users spend 30 to 50 minutes on the bed for other activities before actually sleeping
   → Using notifications to alarms user to sleep. Offer a helpful solutions: Podcast with relaxing music, sleep techniques,…

# USER SLEEP ACTIVITY FINDINGS & IDEAS

## Finding

- On average, users sleep between 6,5 and 7 hours a day. According to CDC (link), we need 7 to 8 hours of sleep a day.
- Users spend 30 to 50 minutes on the bed for other activities before actually sleeping.
  I suppose that user is difficulty sleeping or spending time on the phone.

## Ideas

- Users can set up a desired time to go to sleep and receive a notification minutes before to prepare to sleep. Also offer helpful solutions to help users sleep – ex. Podcast with relaxing music, sleep techniques,…

# INTRODUCTION

Co-founder and Chief Creative Office of Bellabeat, believes that analyzing smart device fitness data could help unlock new growth opportunities for the company.

Key Task:

Analyze smart device to gain insight into how to consumers are using their smart devices. Then, using information to propose high-level recommendations for Bellabeat marketing strategy.
Answer the questions:

1. What are some trends in smart device usage?
2. How could these trend apply to Bellabeat customers?
3. How could these trend help influence Bellabeat marketing strategy?

# METHODOLOGY

1. Data used:
   The data source used for this case is Fitbit Fitness Tracker Data. This dataset was downloaded from Kraggle where it was updated by Mobius under the CC0: Public Domain Creative Common License – allowing for the dataset to be copies, modified, distributed and performs with out asking for permission.

2. The research method:
   Excel:
   Each dataset was cleaned using Excel. The following step was taken within each dataset:
   - Format date data into YYY-MM-DD hh:mm:ss
   - Format all numerical data into Number format with either no decimals or up to  2 decimals.
   - Check for duplicate data using ‘Duplicate data’ tool in Excel.

   T-SQL (Azure)
   After cleaned data, I decided to work with T-SQL to analyze the data.

# RESULT | USE OF SMART DEVICE

First we want to know how often do users use their device. That way we can plan our marketing strategy and see what features would benefit the use of smart devices.

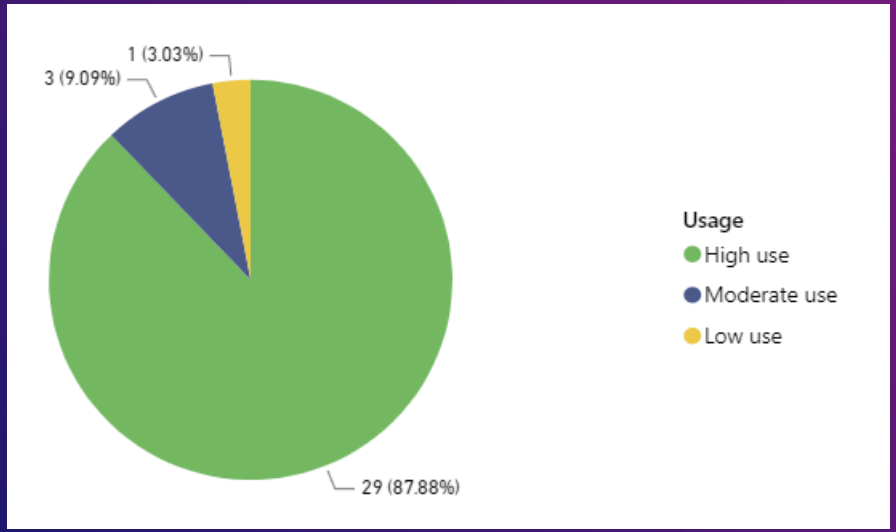
We will categorize users into 3 main categories:

- **High use** – users who use their device **between 25 and 31 days**.
- **Moderate use** – users who use their device **between 15 and 24 days**.
- **Low use** – users who use their device **between 1 and 14 days**.

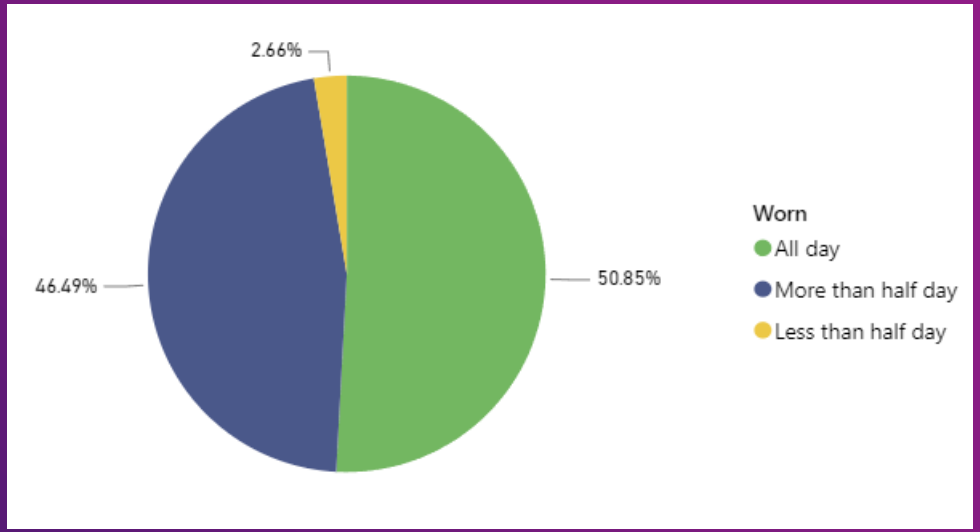
Then, we want to know the user's device usage time of the day.

# USE OF SMART DEVICE

Day use of smart device




Time worn per day



# USE OF SMART DEVICE – FINDINGS & IDEAS

## Finding

- 87,88% of the users use their device frequently 25 – 31 days
- 9,09% use their device 15 to 24 days
- 3,03% use rarely their device

Narrow to a day:

- 50,85% of users wear device all day long.
- 46,49% more than half day
- 2,66% less than half day

## Ideas

87,88% of users use the device for 25 – 31 days which is a relatively sign, but only 50,85% of users wear device all day. We can continue promote Bellabeat's product features:

- Water-resistant
- Fashion / elegant products
- Long-lasting battery

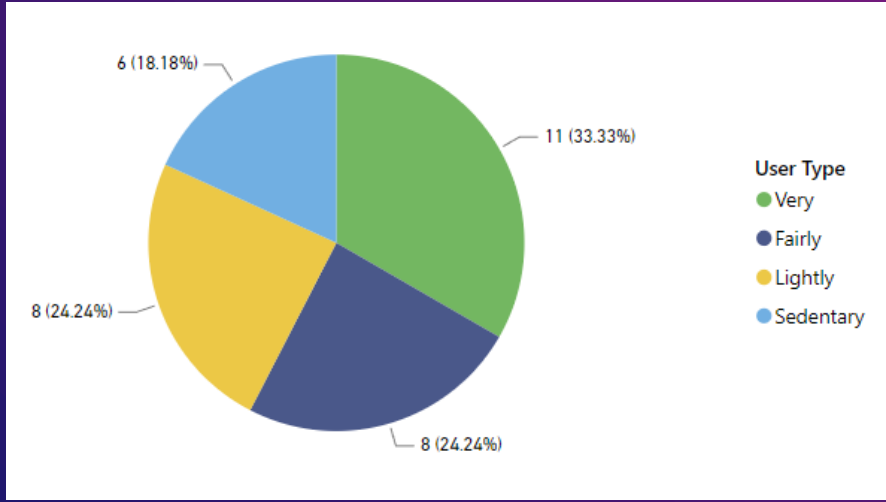
# RESULTS | USER CATEGORY AND CALORIES TREND

We will categorize user into 4 groups using Active Minutes metric:

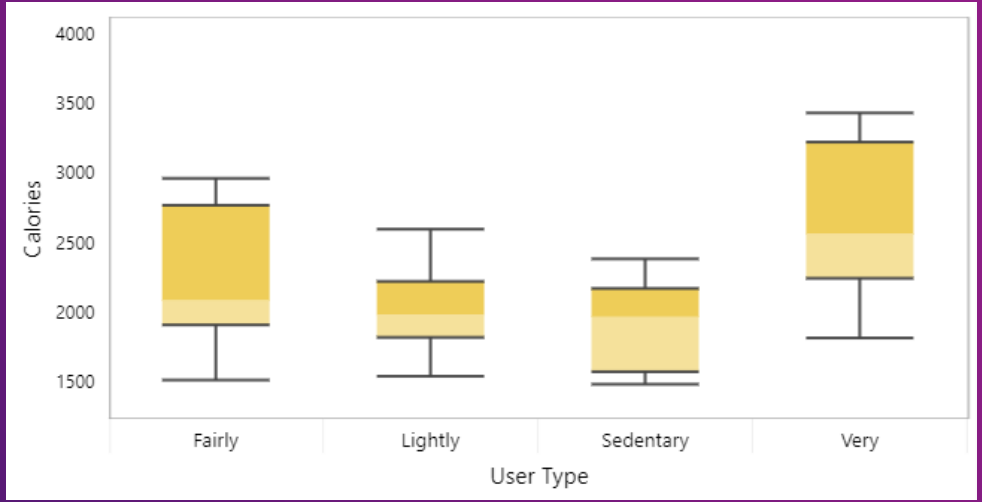
- Very if (VeryActiveMinutes > Mean(VeryActiveMinutes))
- Fairly if (FairlyActiveMinutes > Mean(VeryActiveMinutes))
- Lightly if (LightlyActiveMinutes > Mean(LightlyActiveMinutes))
- Sedentary if (SedentaryActiveMinutes > Mean(SedentaryActiveMinutes))

# USER CATEGORY AND CALORIES TREND

## User Type by Active Minutes




## Calories burned by User Type



# USE OF SMART DEVICE – FINDINGS & IDEAS

## Finding

- 33,33% of users are Very Active User
- The Lightly User and Fairly User are 24,24%
- Sedentary User is least – 18,18%
- Very Active User have the most calories burned. That is not surprising. Next is Fairly, Lightly User and Sedentary User is least.

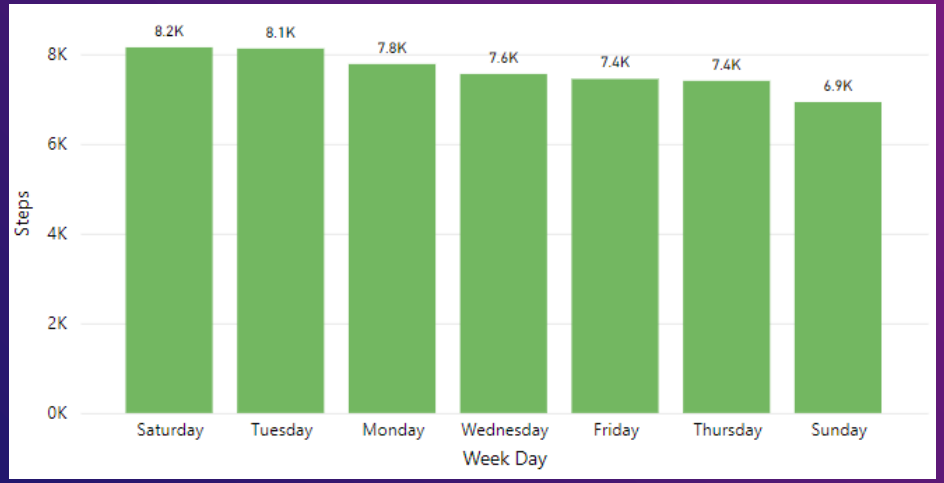
## Ideas

- About ~57% of very and fairly active users. We can to push users to be more active to collect more data

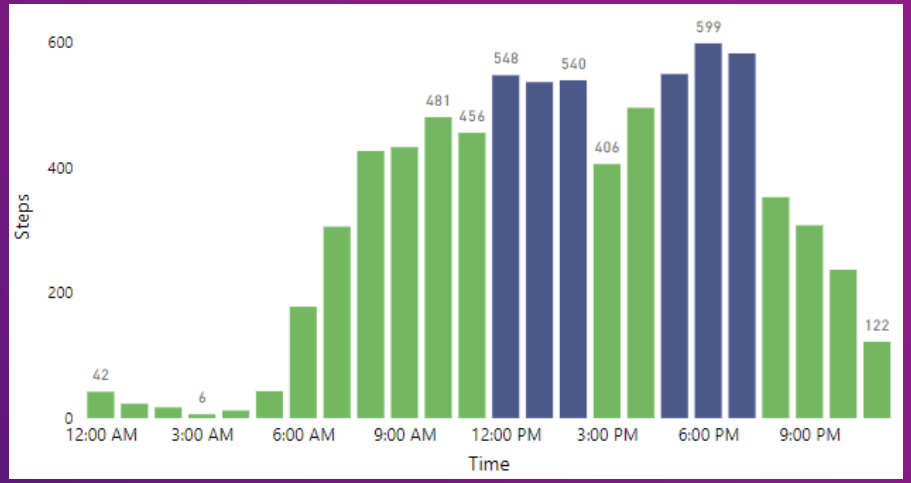
- There is a linear relationship between the activity level and calories burned, it's important for losing weight. So, we can use this fact to motivate users to be more active by pushing notifications or posts on the Bellabeat app.

# RESULT | DAILY STEPS & STEPS THROUGH DAY

## Daily Steps by Week Day




## Steps through Day



# DAILY STEPS – FINDINGS & IDEAS

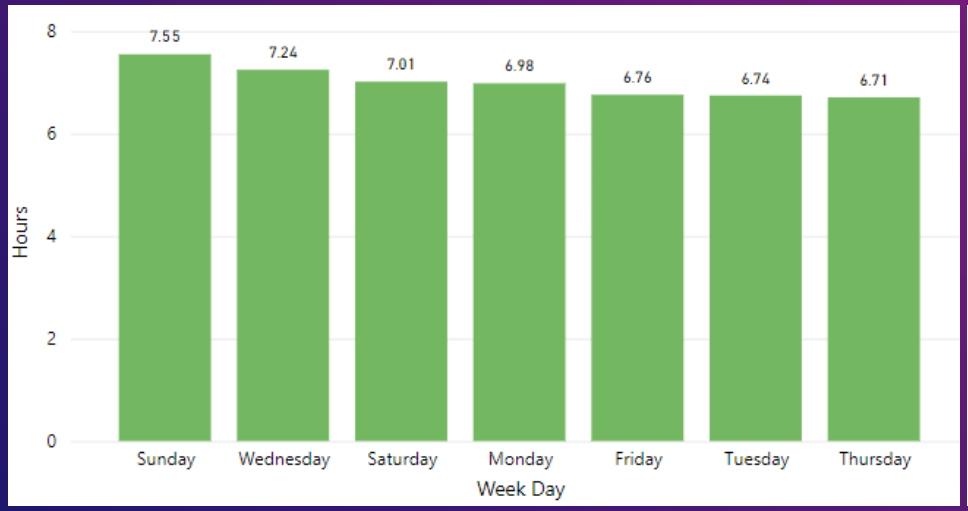
## Finding

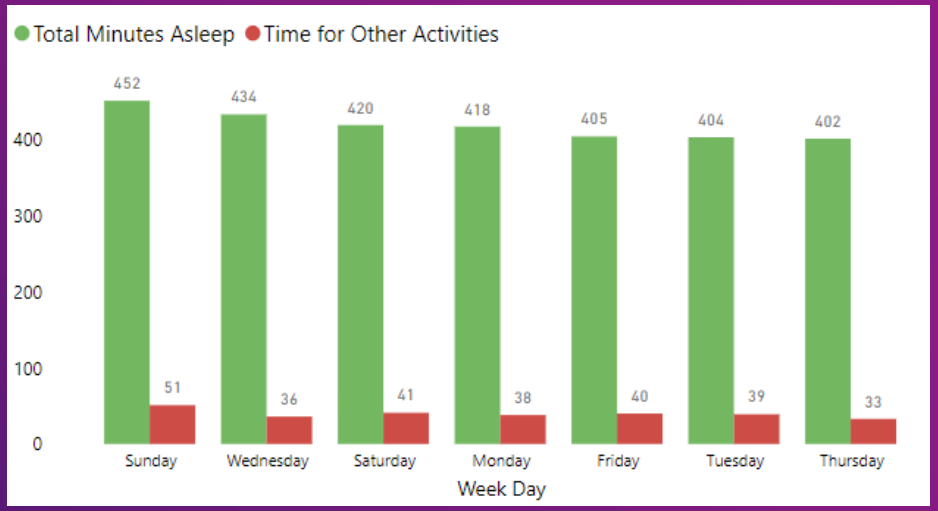
- Users take about an average of 7,500 steps per day. According to CDC (Link), taking 8,000 steps per day is associated with a 51% lower risk for all-cause mortality (or death from all cause). Taking 12,000 steps per day will decrease 65% of the risk.
- During the day, users are most active between 8 a.m to 7 p.m. Especially from 12 p.m to 2 p.m and  5 p.m to 7 p.m

## Ideas

- We can encourage users to reach at least daily recommended step by CDC – 8000 steps by sending them notifications if they haven't reached the steps and creating also posts on Bellabeat app to explaining the benefits of reaching that goal.
- Reward: We can create a game/challenge on our app. The Game will consist different levels based amount of steps walked every day. For each level users have reached, users will receive stars or discounts in exchange for other Bellabeat's products.

# RESULTS | USER SLEEP ACTIVITY



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## Ideas

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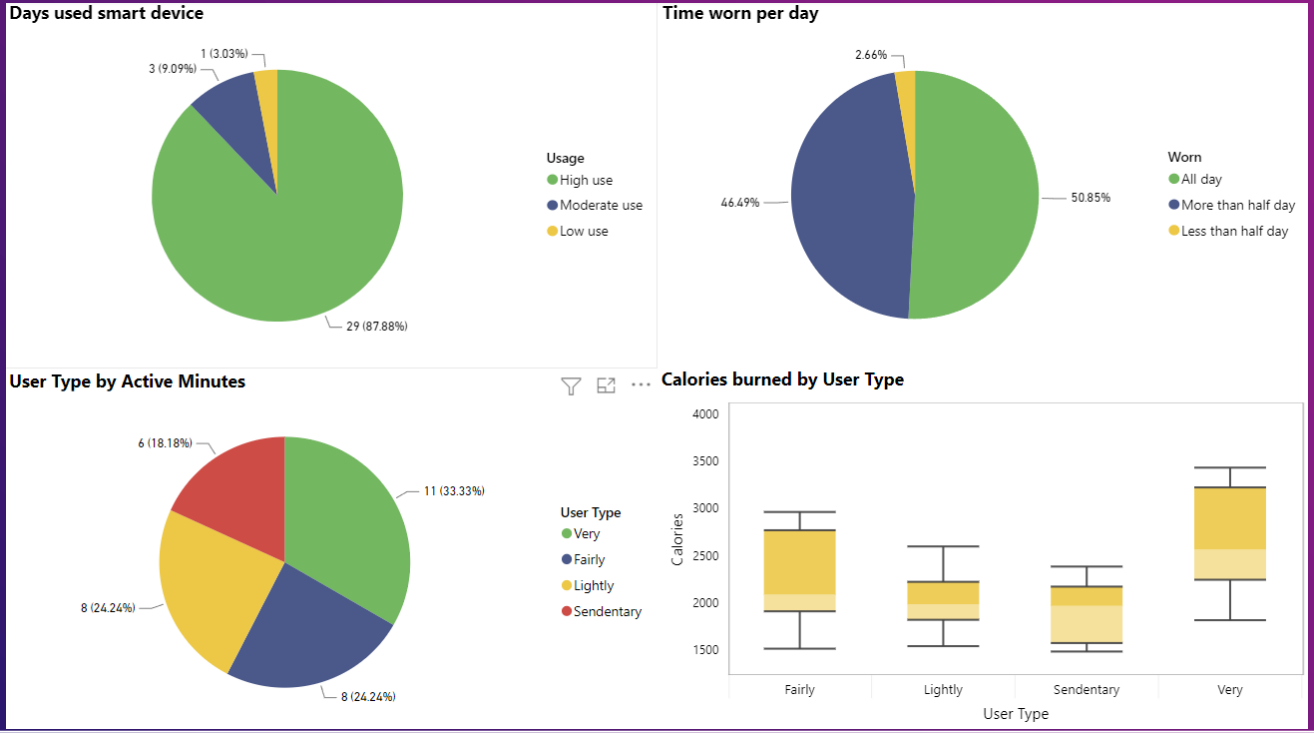
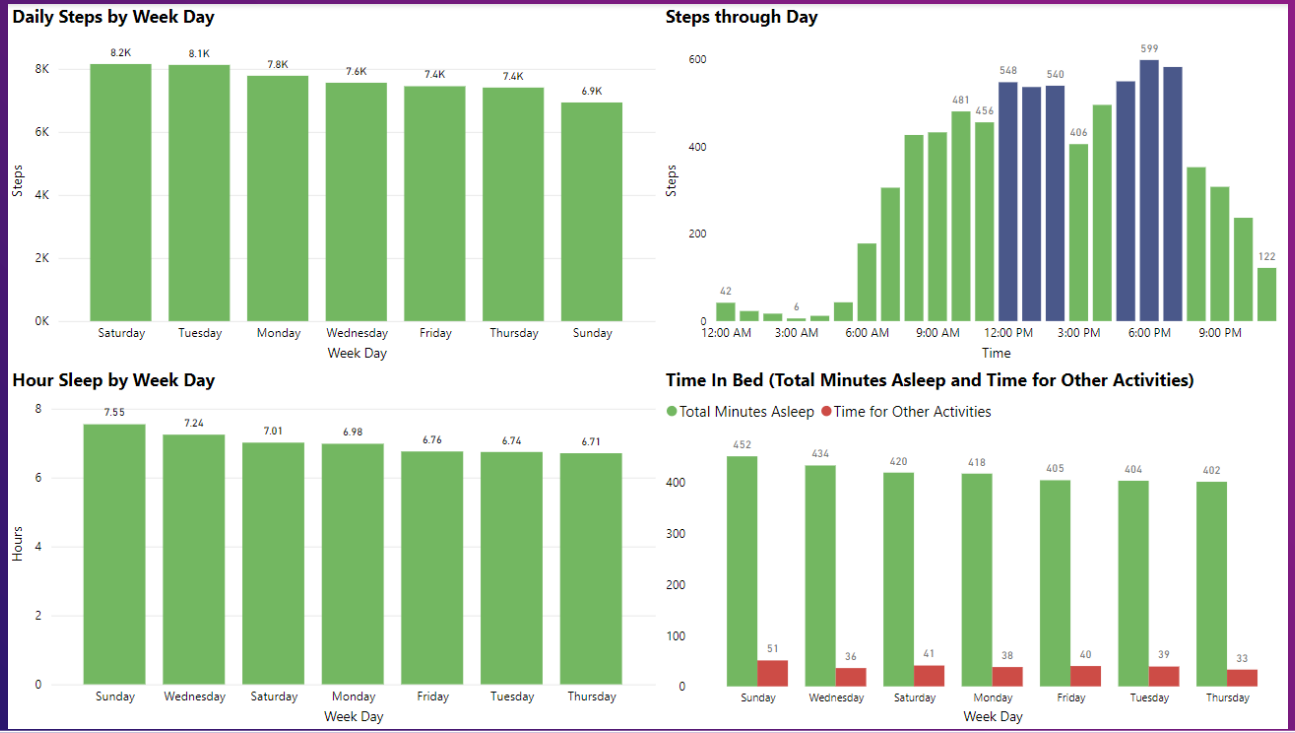
# DASHBOARD TAB 1



# DASHBOARD TAB 2



# CONCLUSION

After analyzing FitBit Tracker Data, We have the following findings:

- 87,88% of the users use their device 25 – 31 days, but only 50,85% of users wear device all day
- 57,57 % of users are Very Active User and Fairly Active User. There is a linear relationship between the activity level and calories burned
- Users take about an average of 7,500 steps per day and sleep between 6,5 and 7 hours a day

I recommend **some insight may help influence Bellabeat marketing strategy**:

- Continue promote Bellabeat's product features:
  - Water-resistant
  - Fashion / elegant products
  - Long-lasting battery
- Daily notification on steps and posts on app
- Reward system
- Notification and sleep techniques

**Own your future by owning your data.**

# THANK YOU FOR YOUR TIME !