Bellabeat health tracker Analysis Report
Analysis, charts & Recommendations

Date: 17 July 2022
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Business task statement

Identifying trends by analyzing smart device data to understand how users use these smart devices and applying these trends to a bellabeat product to get an idea about how bellabeat customers use their devices, and how these insights will influence bellabeat marketing strategy, and help reveal more opportunities for growth.

Data sources used :
FitBit Fitness Tracker Data by MÖBIUS (Kaggle)

This dataset was generated by respondents to a distributed survey via Amazon Mechanical Turk between 03.12.2016-05.12.2016. Thirty eligible Fitbit users consented to the submission of personal tracker data, including minute-level output for physical activity, heart rate, and sleep monitoring.

https://www.kaggle.com/datasets/arashnic/fitbit

Technologies used : SQL, R, Tableau

Cleaning documentation :
https://drive.google.com/file/d/1b08UHpYF3aOUdEFOGNNGZ-lWXsyM-gYr/view?usp=sharing
📄 Cleaning documentation.pdf

Change Log :
https://drive.google.com/file/d/1b6kFnbSiHQC6IWgtOCgeAwVunFBABFx6/view?usp=sharing
📄 Change_log.pdf

Analysis Summary and visualizations:
https://drive.google.com/file/d/1a5OAK_vlo_U4-5iiktDrf9PiQmWpcmC5/view?usp=sharing
📄 Analysis Summary .pdf

Sample size: 30-34 users
Confidence level: 95%
Margin Of Error: 17.9

Main key findings: 67% of bellabeat users have unhealthy sleeping habits (patterns) and they can be the target audience for the next campaign(**there is an opportunity for growth) more details can be found in recommendation section
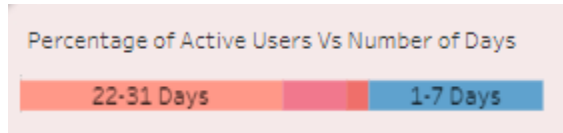
1- Total number of users is 34 Users
2- only 24 Users has records (Active Users)

***in the following analysis I analyzed data for active users only (24 users)

Active - Not Active Users

Active

Not Active

3- Active Users represent 71% of Total Users and non-active users represent 29%.
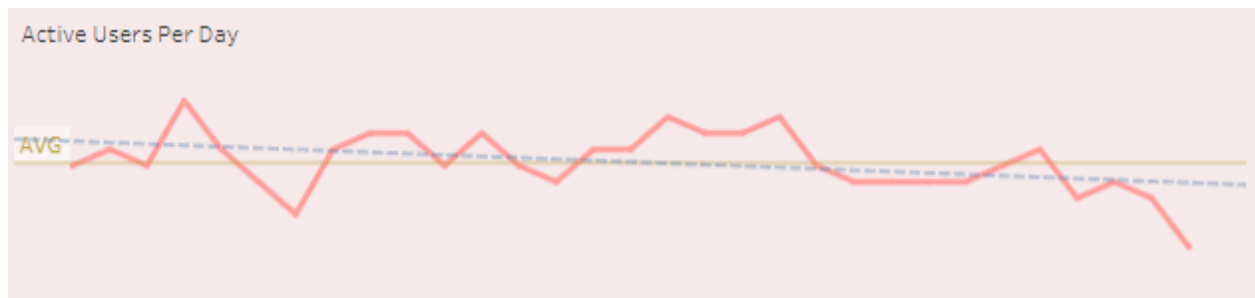
Percentage of Active Users Vs Number of Days

22-31 Days   1-7 Days

4- 67% of users use their devices more than 8 days/month
5- 33% of users use their devices less than 8 days/month (1-7 1 Days)

Users and Weight Logs

No Weight Logs
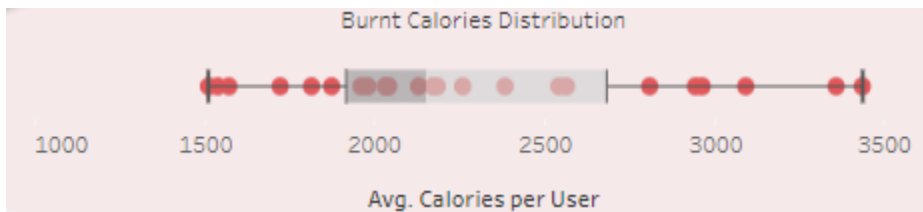
6- 21% of users logged their weight.
7- 79% of users did not log their weight.

Active Users Per Day

AVG

8- the number of active users starts increasing from mid month (11th of the month) and start decreasing when reaching the end and the beginning of the month (we need more data to confirm this pattern)

Total Active Users on Weekdays

	Sunday
	Monday
	Tuesday
	Wednesday
	Thursday
	Friday
	Saturday
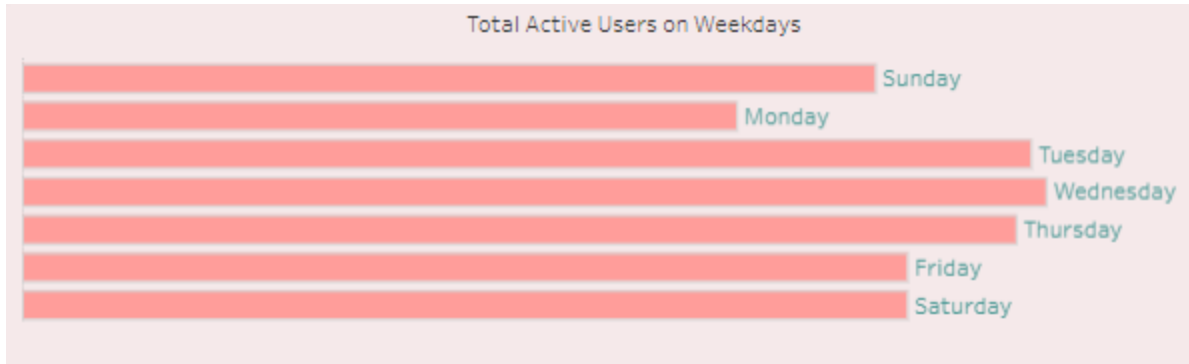
9- According to hypothesis testing there's no association between number of users and weekdays however from charts we can see that there are more users on tuesday, wednesday and thursday than any other day of the week.

Burnt Calories Distribution

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1000      1500      2000      2500      3000      3500
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Avg. Calories per User

10- 75 % of users burn more than 2000 calories (2000 - 3500 normal to active)

Hours asleep

Hours asleep
|		
< 7 Hours		54%
> 7 Hours		46%

11- 54% of users sleep less than 7 hours (recommended sleeping hours 7h/day)
12- 46% of users sleep more than 7 hours (normal)

Minutes to fall asleep

Minutes before sleep
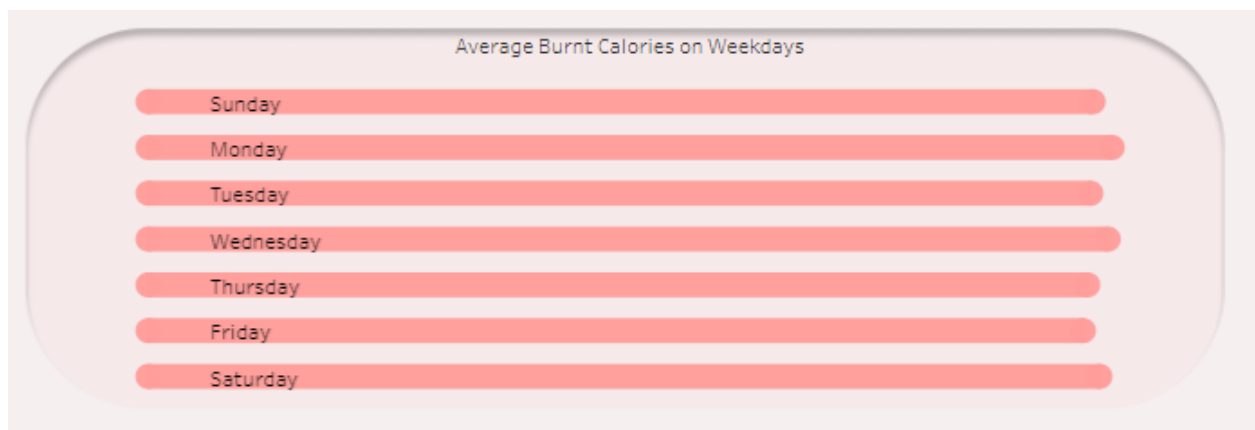|		
<20 Minutes	33%	
> 20 Minutes	67%	
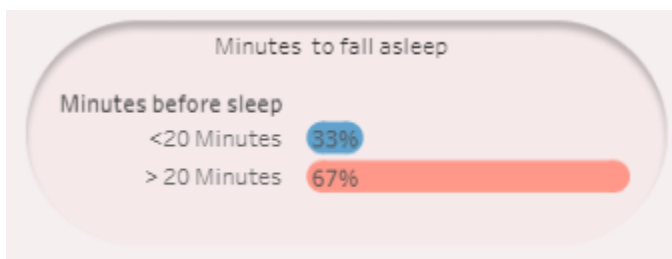
13- 67% of users take more than 20 minutes to fall asleep (normal time 5-20 minutes)
14- 33% of users take less than 20 minutes to fall asleep (normal)

Average minutes before falling asleep
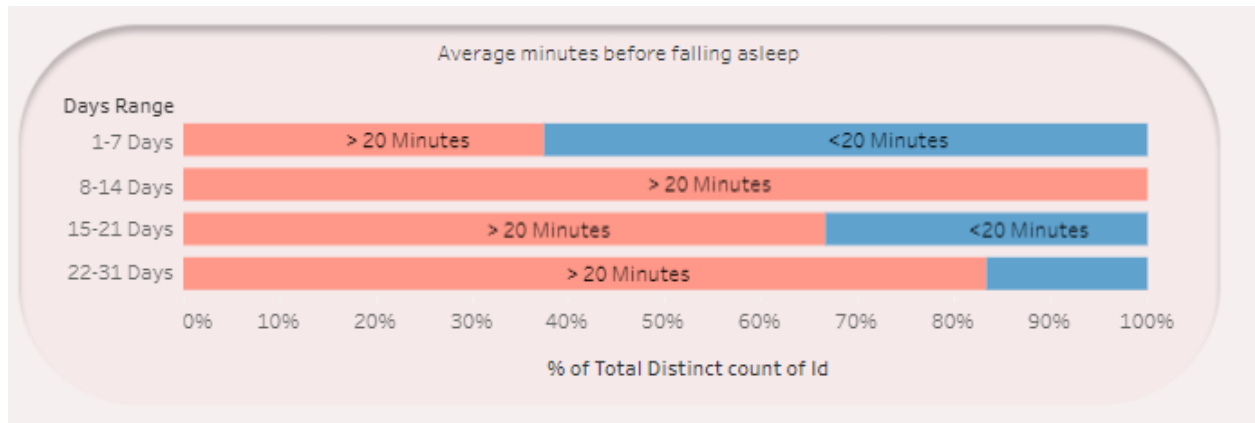
15- users who use the device for more than 8 days tends to have more time falling asleep

Average Burnt Calories on Weekdays

16- average burnet calories per day is not associated with weekdays (it is mostly the same all week long)

Recommendations

I recommend that in the next marketing campaign posts should mainly focus on mental and physical wellbeing and how users can benefit from subscribing (only for 9.99$ per month) to Bellabeat Wellness Coach that has a library that contains books, articles and videos about meditations and exercises to help users have quality sleep and reduce insomnia that might cause anxiety. Users can follow guided meditations before going to sleep, this will help them reduce time taken to fall asleep.

By maintaining good sleep habits they will increase productivity and protect their mental and physical health which is the main goal of designing bellabeat health trackers.

Target audience : users who use Bellabeat devices more than 8 days and take more than 20 minutes to fall asleep represent 67% of Bellabeat active users.