

# FitBit Consumer Behaviour Analysis

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## 1. Summary

The business task is to analyze the FitBit Fitness Tracker App data, which was collected through a distributed survey on Amazon Mechanical Turk between March 12, 2016, and May 12, 2016. The dataset includes personal tracker data from thirty eligible Fitbit users, covering minute-level output for physical activity, heart rate, and sleep monitoring.

The data is distributed across 18 different files, such as dailyActivity, dailyCalories, hourlySteps, etc.

## 2. Data Sources

Given data is as follows:

[daily\\_activity\\_merged.csv](#)  
[daily\\_calories\\_merged.csv](#)  
[daily\\_intensities\\_merged.csv](#)  
[daily\\_steps\\_merged.csv](#)  
[heartrate\\_seconds\\_merged.csv](#)  
[hourly\\_calories\\_merged.csv](#)  
[hourly\\_intensities\\_merged.csv](#)  
[hourly\\_steps\\_merged.csv](#)  
[minute\\_calories\\_narrow\\_merged.csv](#)

[minute\\_calories\\_wide\\_merged.csv](#)  
[minute\\_intensities\\_narrow\\_merged.csv](#)  
[minute\\_intensities\\_wide\\_merged.csv](#)  
[minute\\_mets\\_narrow\\_merged.csv](#)  
[minute\\_sleep\\_merged.csv](#)  
[minute\\_steps\\_narrow\\_merged.csv](#)  
[minute\\_steps\\_wide\\_merged.csv](#)  
[sleep\\_day\\_merged.csv](#)  
[weight\\_loginfo\\_merged.csv](#)

### **3. Cleaning And Merging The Data**

Steps involved in cleaning the data:

- Checking for missing values
- Separated the date column into date and time
- Removing duplicates
- Changing the data types

After merging the final datasets are:

[daily\\_activity\\_cleaned.csv](#)  
[hourly\\_activity\\_cleaned\\_merged.csv](#)  
[minute\\_activity\\_cleaned\\_merged.csv](#)  
[heartrate\\_seconds\\_cleaned.csv](#)  
[sleepday\\_cleaned.csv](#)  
[weightlog\\_cleaned.csv](#)

As we compare the datasets from data sources section and merging section some datasets are missing lets know it how:

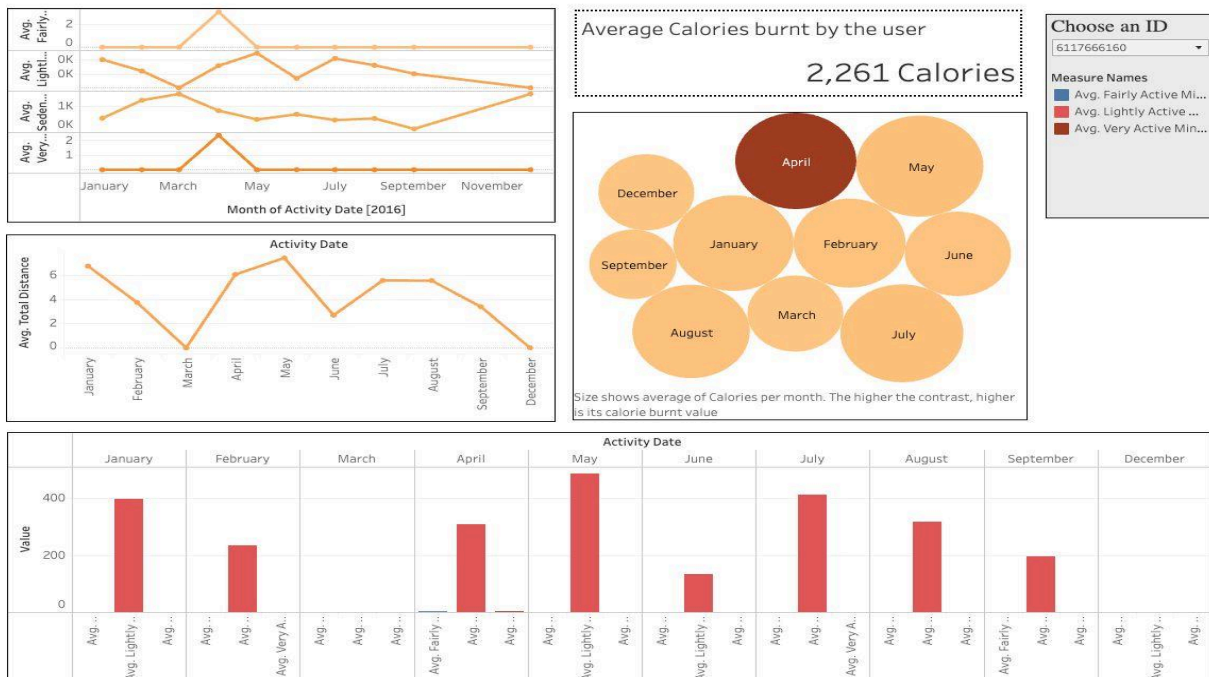
We neglected data\_calories\_merged.csv, daily\_intensities\_merged.csv and daily\_steps\_merged.csv files as the combination of these files is present in daily\_activity\_merged.csv file

In the minutes dataset we have two types of sets namely Narrow and Wide in this we used Narrow dataset and neglected Wide dataset. The reason behind this is that a Narrow dataset has less number of columns when compared to a Wide dataset which helps us in merging.

## 4. Result

The visualization is done in Tableau dashboards. Click the hyperlink to access the tableau file.

### [Dashboard of daily\\_activity\\_analysis](#)

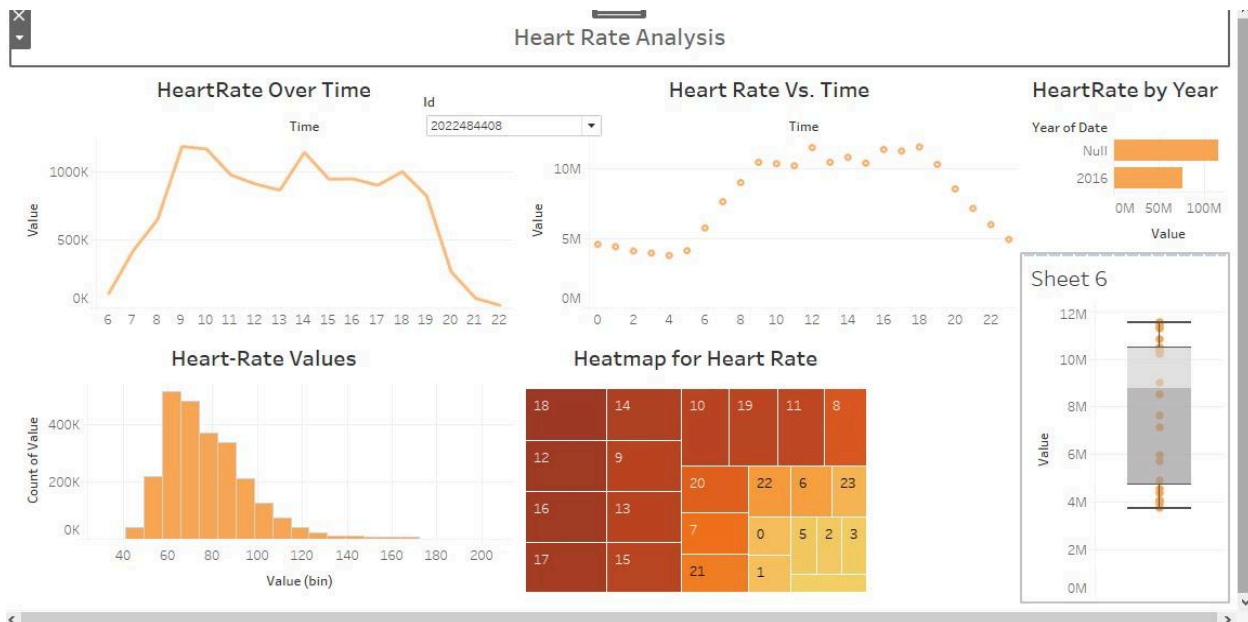




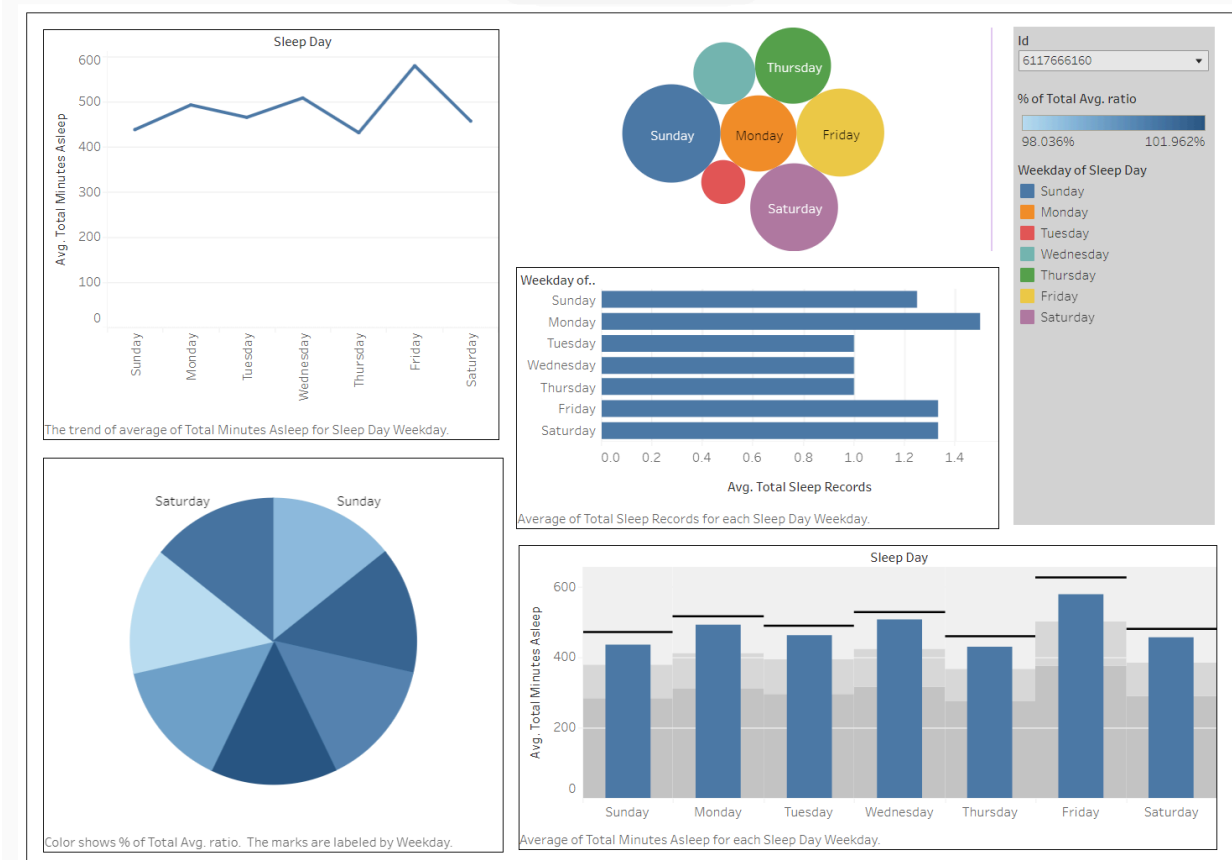
## Dashboard of minute\_activity\_analysis



## Dashboard of heart\_rate\_analysis



## Dashboard of sleep\_day\_analysis



## Dashboard of weight\_log\_analysis

