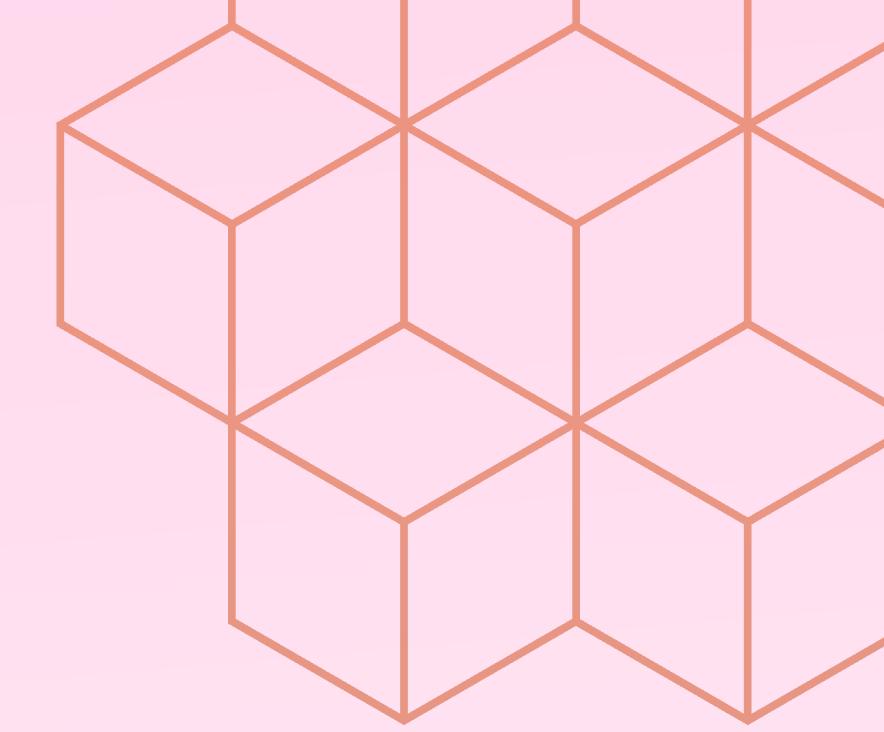
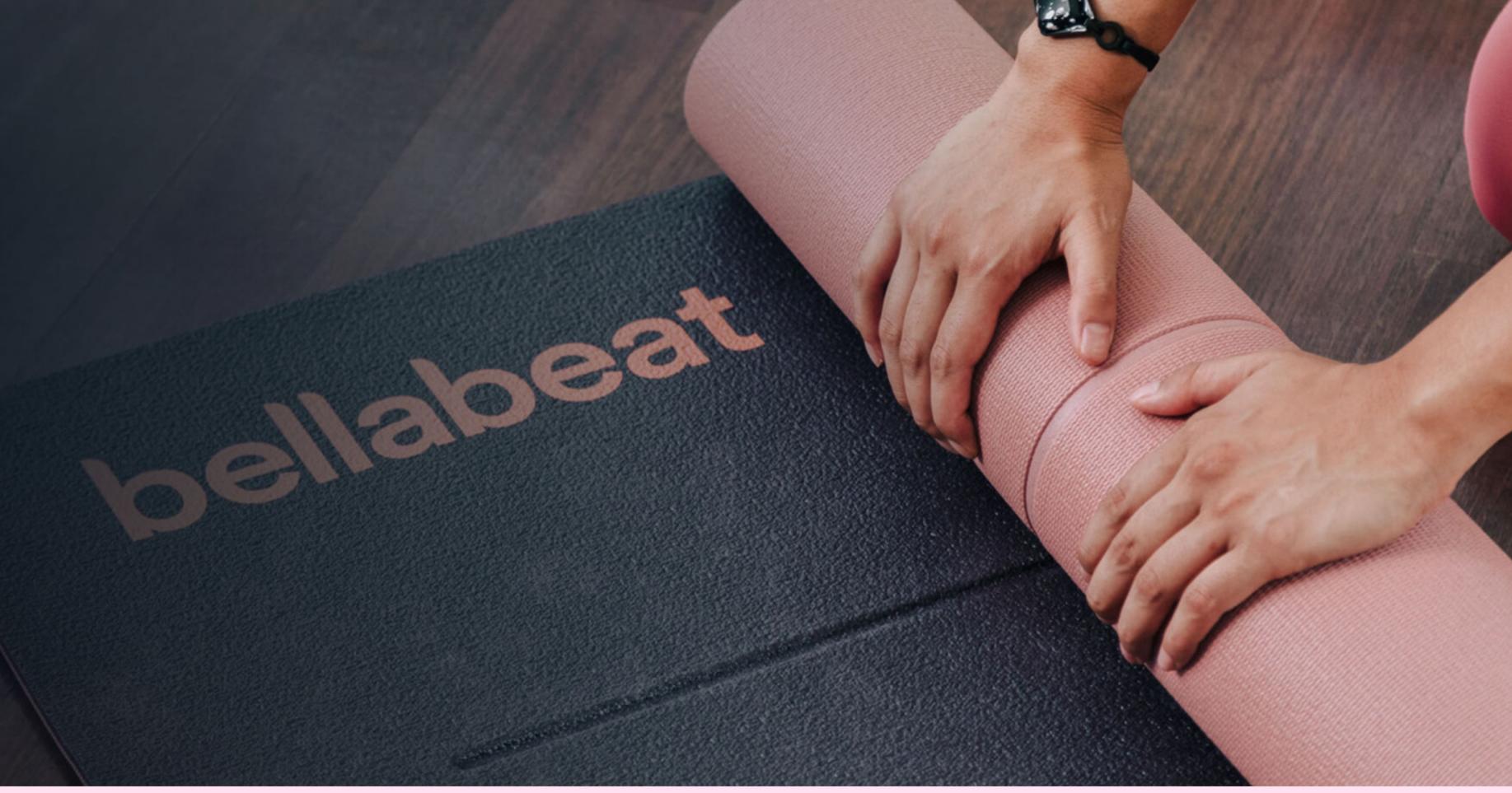




How can a wellness company play it Smart?

A bellabeat case study

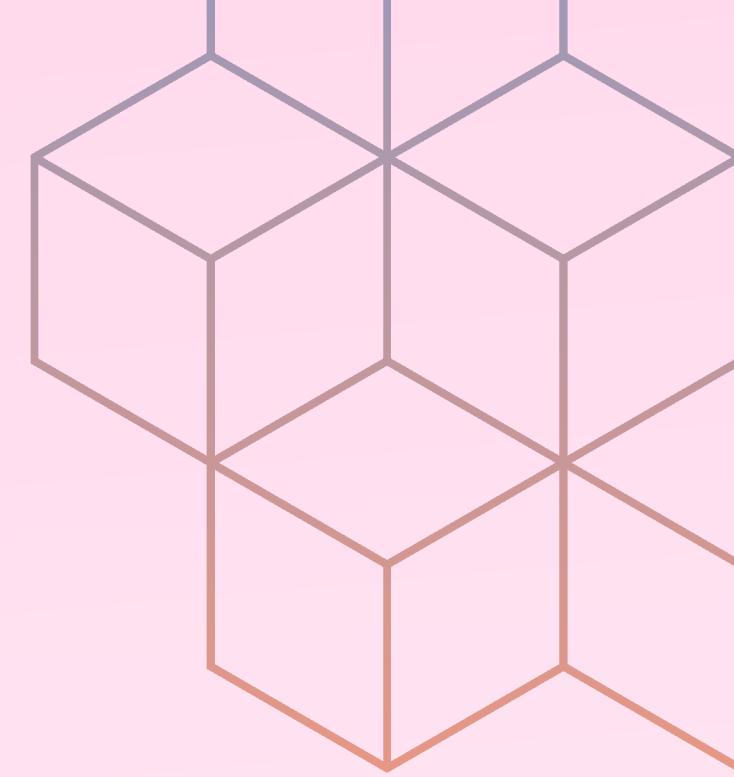




Bellabeat is a health-focused technology company that designs smart wellness products specifically for women.

Founded in 2014, Bellabeat combines wearable technology with mobile apps to help users track activity, sleep, stress levels, menstrual cycles, and mindfulness practices. The company aims to promote holistic wellness through personalized, data-driven insights.

Challenges and Objectives

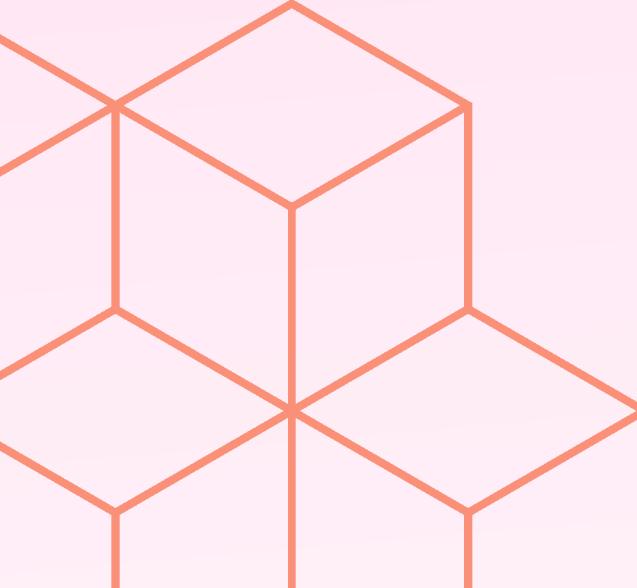


Challenges

- Bellabeat lacks data-backed insights to guide marketing and product decisions in a highly competitive wellness market
- The company has access to raw Fitbit data, but not the analytics capability to extract behavioral trends from it
- Bellabeat needs to understand when, how, and why users engage with wellness routines to better position their smart devices

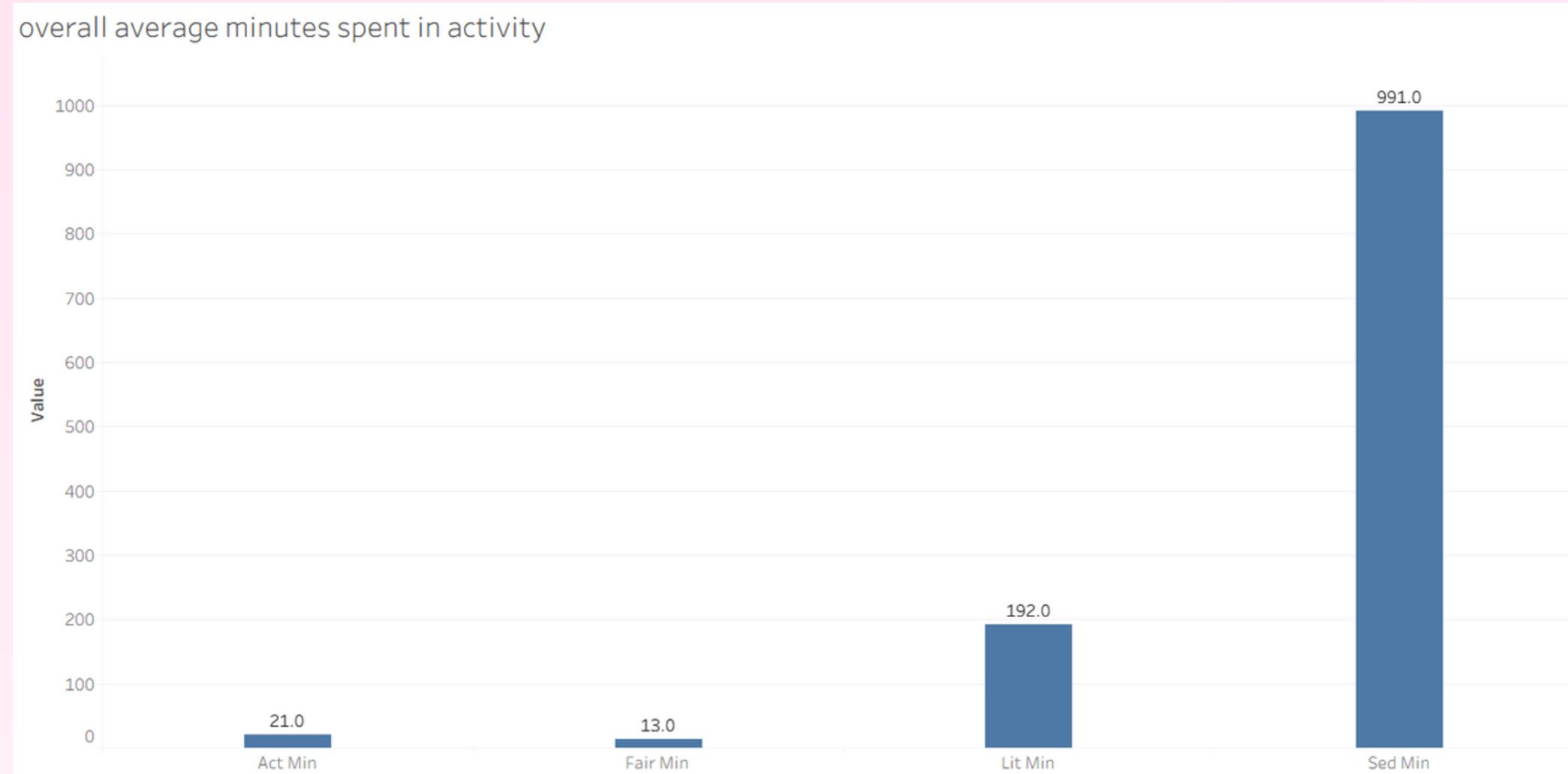
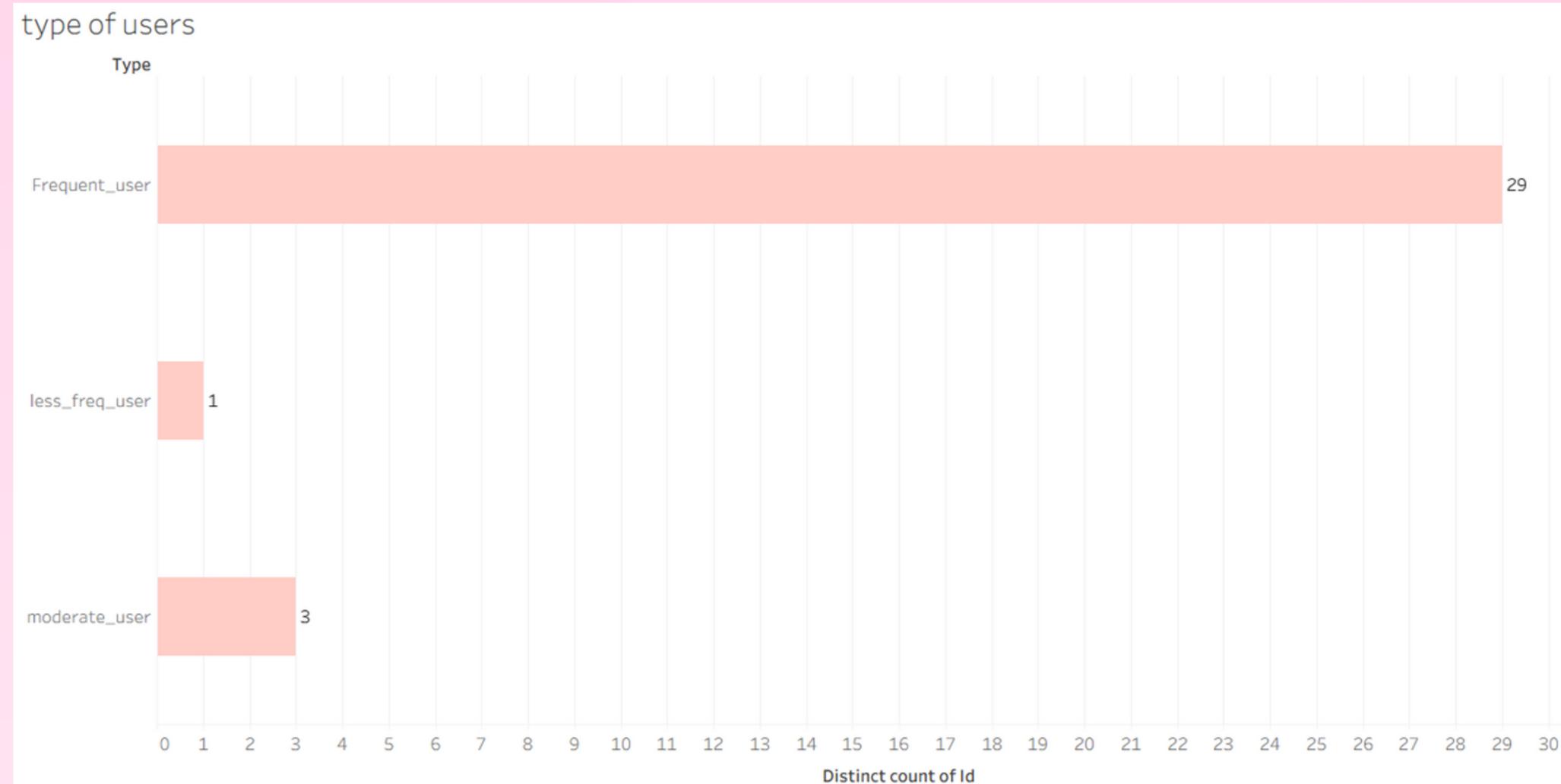
Objectives

- Leverage Fitbit activity and lifestyle data to identify user patterns related to sleep, steps, and intensity levels
- Uncover key behavioral trends that can inform Bellabeat's targeted marketing and personalized recommendations
- Provide actionable insights to help Bellabeat improve engagement, highlight unique selling points, and drive smart product adoption

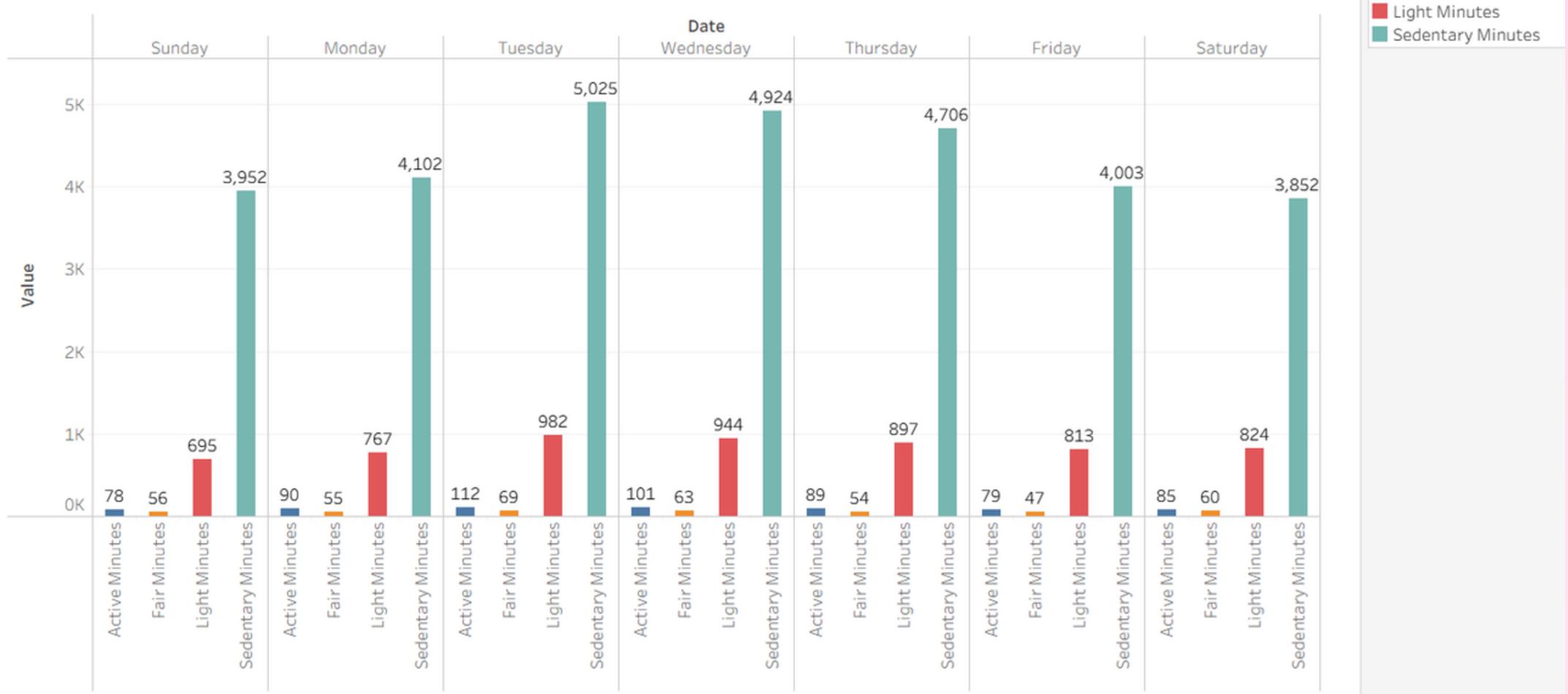


A majority of users (29 out of 33) are classified as Frequent Users, engaging with their fitness trackers on more than 21 days in the dataset.

- Users spend an overwhelming majority of their day (991 minutes) being sedentary.
- Only 21 minutes are spent in very active minutes, 13 in fairly active, and 192 in light activity.
- This suggests that despite owning fitness trackers, most users lead sedentary lifestyles



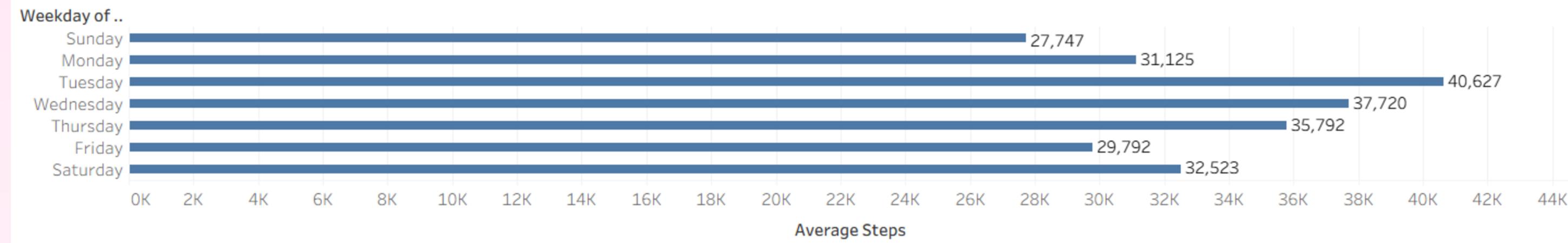
activity minutes



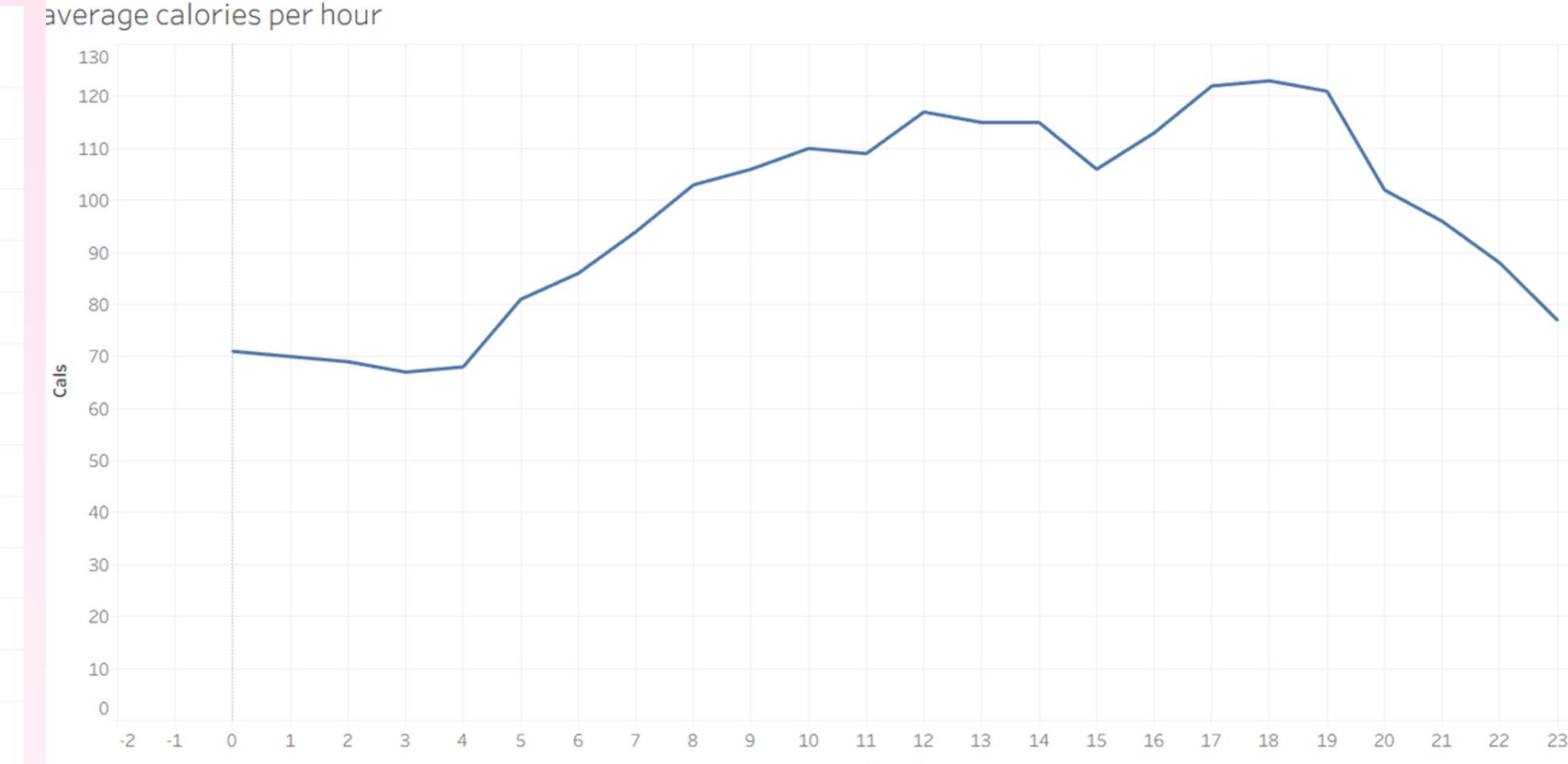
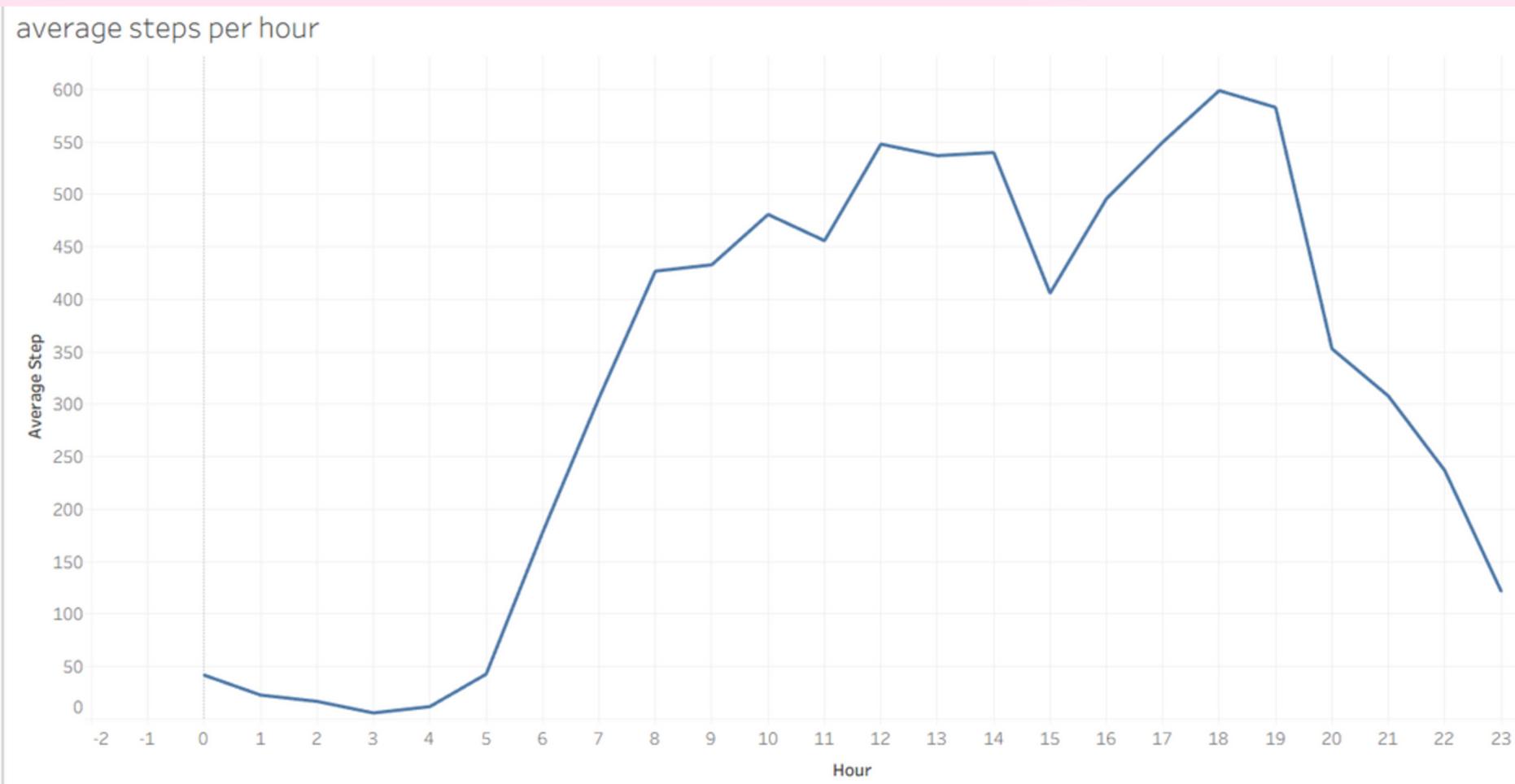
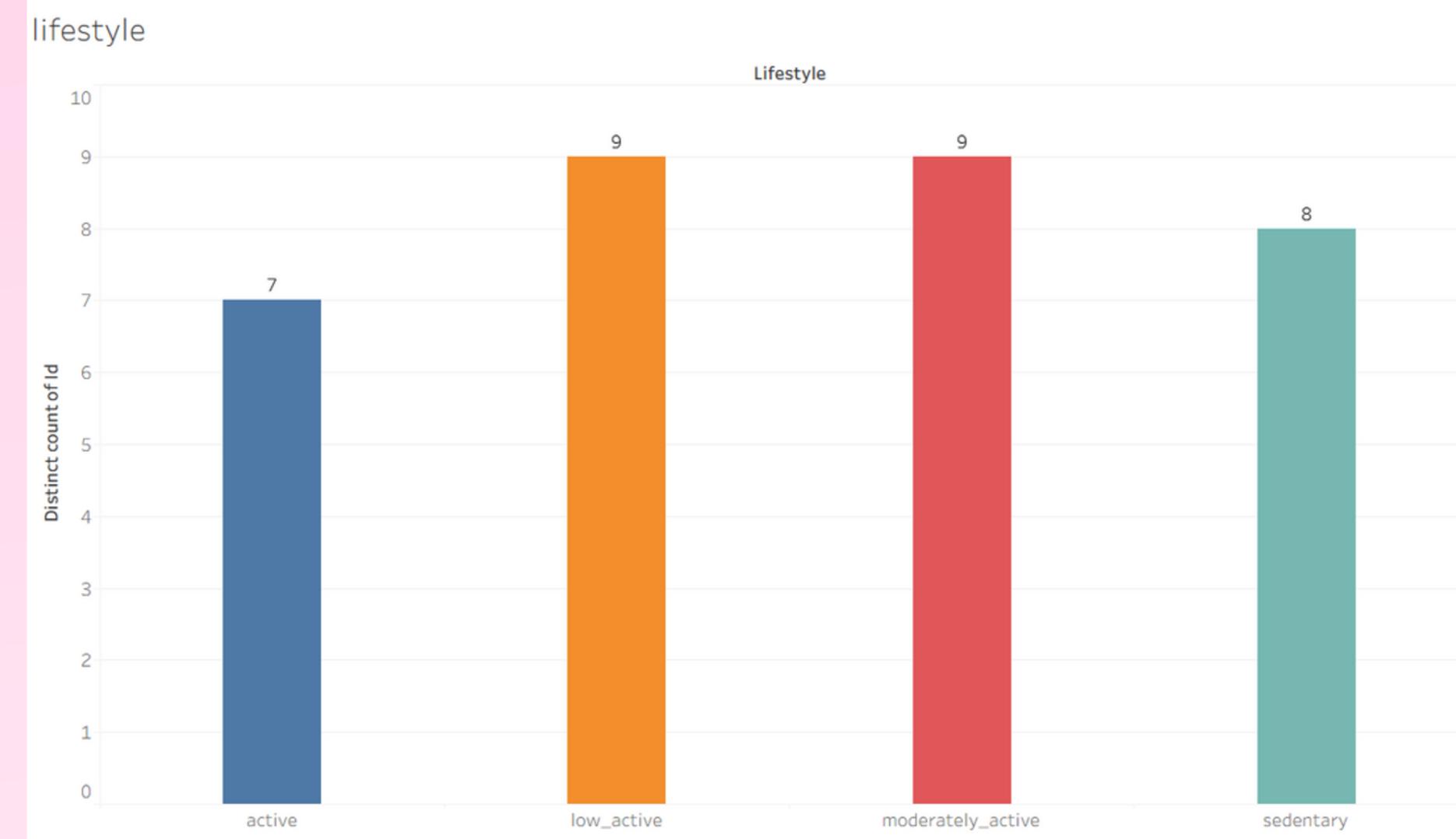
Bellabeat users exhibit noticeably higher physical activity and step counts on weekdays, especially Tuesday through Thursday, compared to weekends.

Despite being frequent users of fitness devices, sedentary minutes remain dominant across all days, averaging over 4,000 minutes weekly.

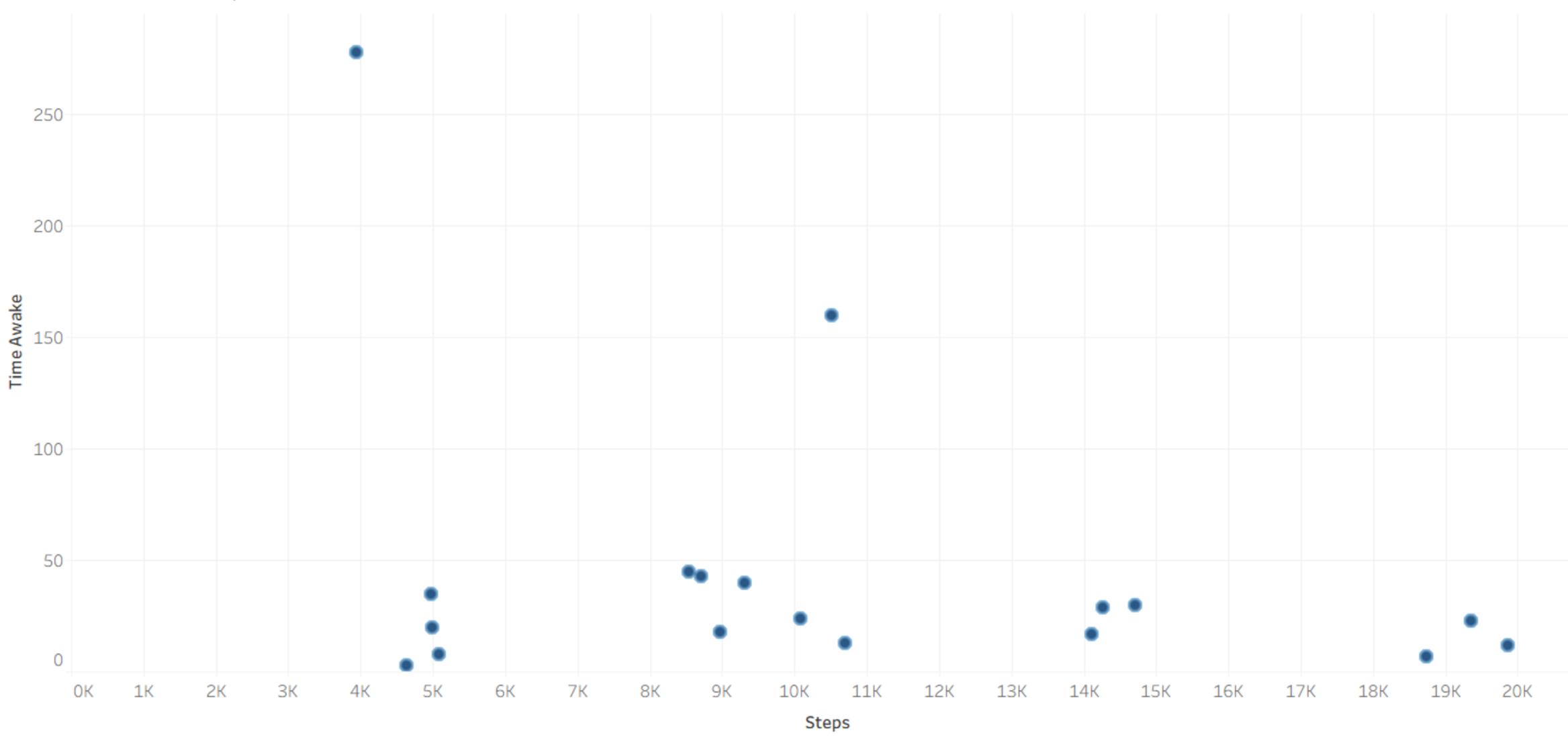
average steps weekdays



The majority of users fall into low-active or moderately active lifestyle categories, with only a few classified as highly active. Peak physical activity occurs between 10 AM and 7 PM, where both step count and calories burned are consistently higher between 3PM and 8PM.



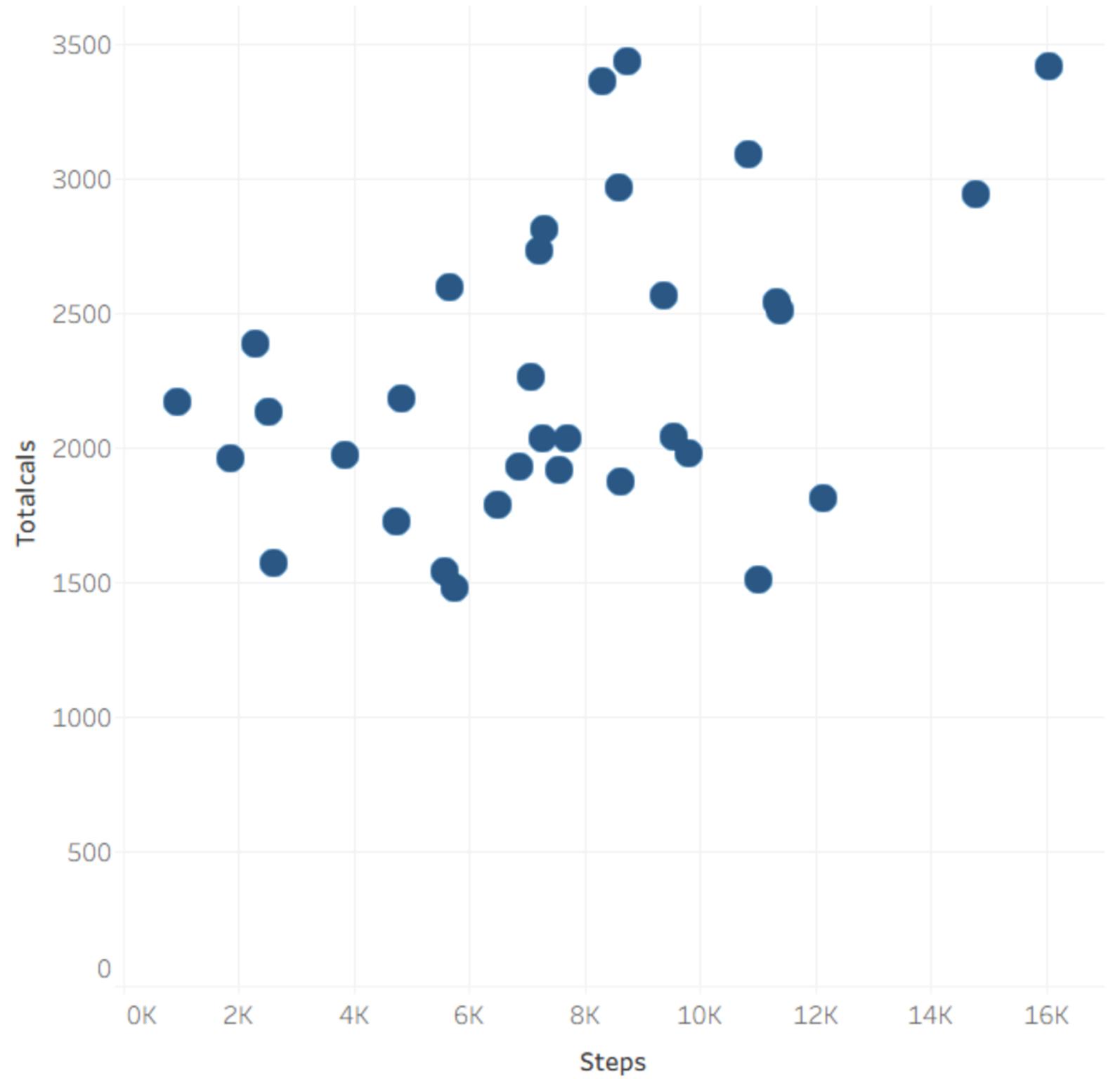
time awake vs steps



- There is no clear correlation between the number of steps taken and time spent awake during the night (sleep disturbances).
- Users with both low and high step counts report episodes of wakefulness, suggesting that physical activity alone may not be influencing sleep quality.

Unlike many fitness trackers that promote movement for better sleep, the data indicates that steps alone are not a reliable predictor of restful sleep. Bellabeat can stand out by integrating holistic wellness tracking, including stress levels, mindfulness habits, and hormonal cycles, which may offer a more complete picture of sleep health than competitors who focus only on physical exertion.

steps and calories



- The scatter plot shows a moderate positive relationship between the number of steps taken and total calories burned.
- As step count increases, users tend to burn more calories, though the variation in calorie burn at similar step levels suggests that other factors (like heart rate intensity, metabolism, and time of activity) also play a role.

Recommendations

- 1. Introduce Personalized Activity Plans Based on User Segments

Elaboration:

With the majority of users falling under "Frequent" but still largely sedentary, Bellabeat should tailor personalized weekly goals for "Moderate" and "Low Active" users to improve engagement across the board.

- 2. Enhance Sedentary Lifestyle Alerts

Elaboration:

Sedentary minutes far exceed active minutes for most users. Use real-time data to push gentle nudges or mini workouts during prolonged inactivity – especially in afternoon hours where activity dips.

- 3. Diversify Health Insights Beyond Steps

Elaboration:

Since steps don't correlate with sleep and only moderately with calories, Bellabeat should promote its strength in holistic wellness – offering insights tied to sleep quality, mindfulness, hydration, and menstrual cycles.

- 4. Optimize Engagement by Hour and Weekday

Elaboration:

Activity peaks from 10 AM to 7 PM and on Tuesdays and Wednesdays. Plan app notifications, challenges, and promotions during these peak periods for maximum user interaction.

- 5. Launch Sleep & Recovery Coaching

Elaboration:

There's no clear relationship between steps and sleep interruptions. Bellabeat can create a differentiated edge by offering sleep recovery recommendations based on wake minutes, stress levels, and daily exertion.