



Bellabeat's Case Study: Analyzing Smart Device Usage Data

We explore how non-Bellabeat smart devices are being used and how we can apply these insights to Bellabeat's products.

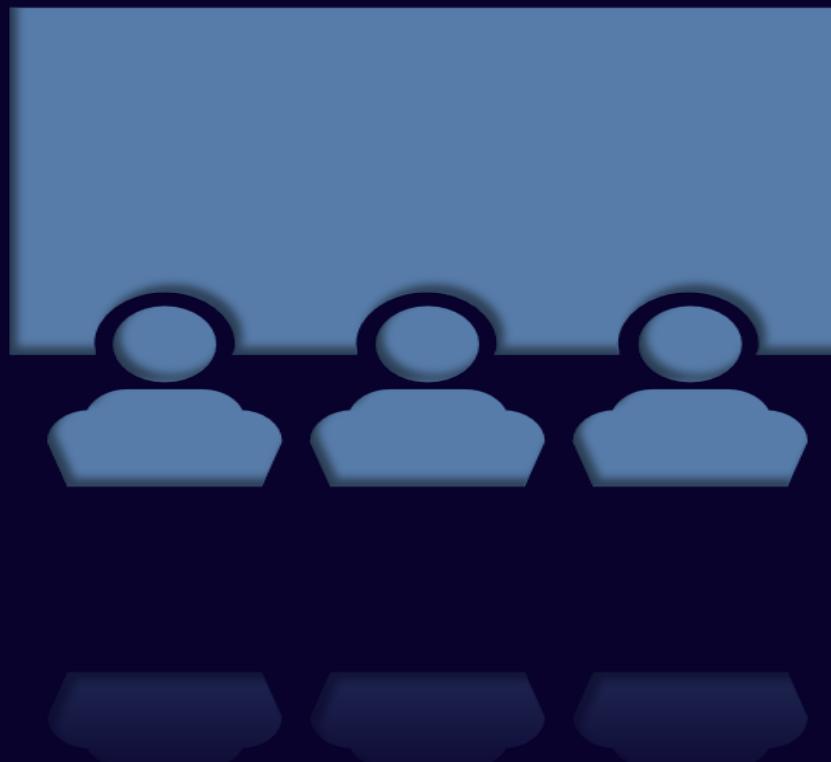
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19-04-2023

Business Questions



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

Outline



- Executive Summary
- Introduction
- Methodology
- Visualizations
 - Dashboards
 - Charts
 - Findings
- Conclusion
- Appendix

Executive Summary



- **Goal of the analysis**
- **Methodology Description**
- **Capturing usage smart devices for non-Bellabeat consumers for April and May 2016**
 - Average calorie burn, average walking steps
 - Sleeping patterns and weekly activity
- **Consumers in dataset in terms of Usage**
 - Non-Bellabeat users

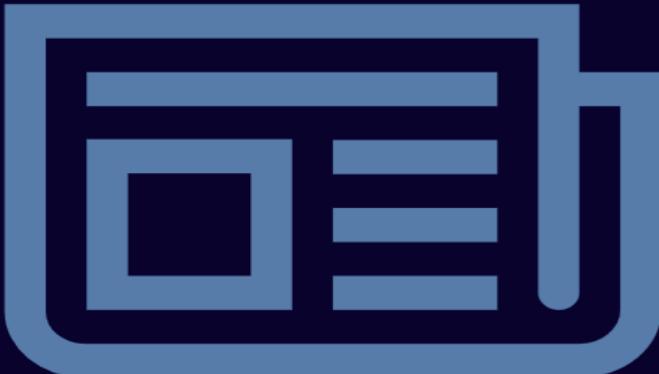
Introduction



- The dataset is hypothetical and contains smart device-captured data on daily consumer activity.
- The data collected represent non-Bellabeat users
- Analyzing the current usages and trends in terms of their daily activity taken from April 2016 to May 2016
- Purpose of Analysis
 - Analyzing usage of their daily activity, weekly activity
 - Use insights for Bellabeat's marketing strategy and getting attention of the consumers
- Target Audience
 - Non-Bellabeat smart device users

Methodology

- **DATA COLLECTION**
 - Non-Bellabeat consumers data for 2016(April and May)
 - Collecting and Merging Datasets
- **DATA EXPLORATION**
 - Seeing Trends Through Data
- **EXPLORATORY DATA ANALYSIS(EDA)**
 - Basic Statistical Analysis
 - Data Distribution
 - Finding Outliers
- **DATA VISUALIZATION**
 - Tableau Desktop
- **DATA PRESENTATION**
 - Microsoft PowerPoint



Top Trends in Smart Device Usage

1

2

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Connected Fitness

Smart devices are commonly used for tracking fitness data including steps, workouts, and sleep patterns.

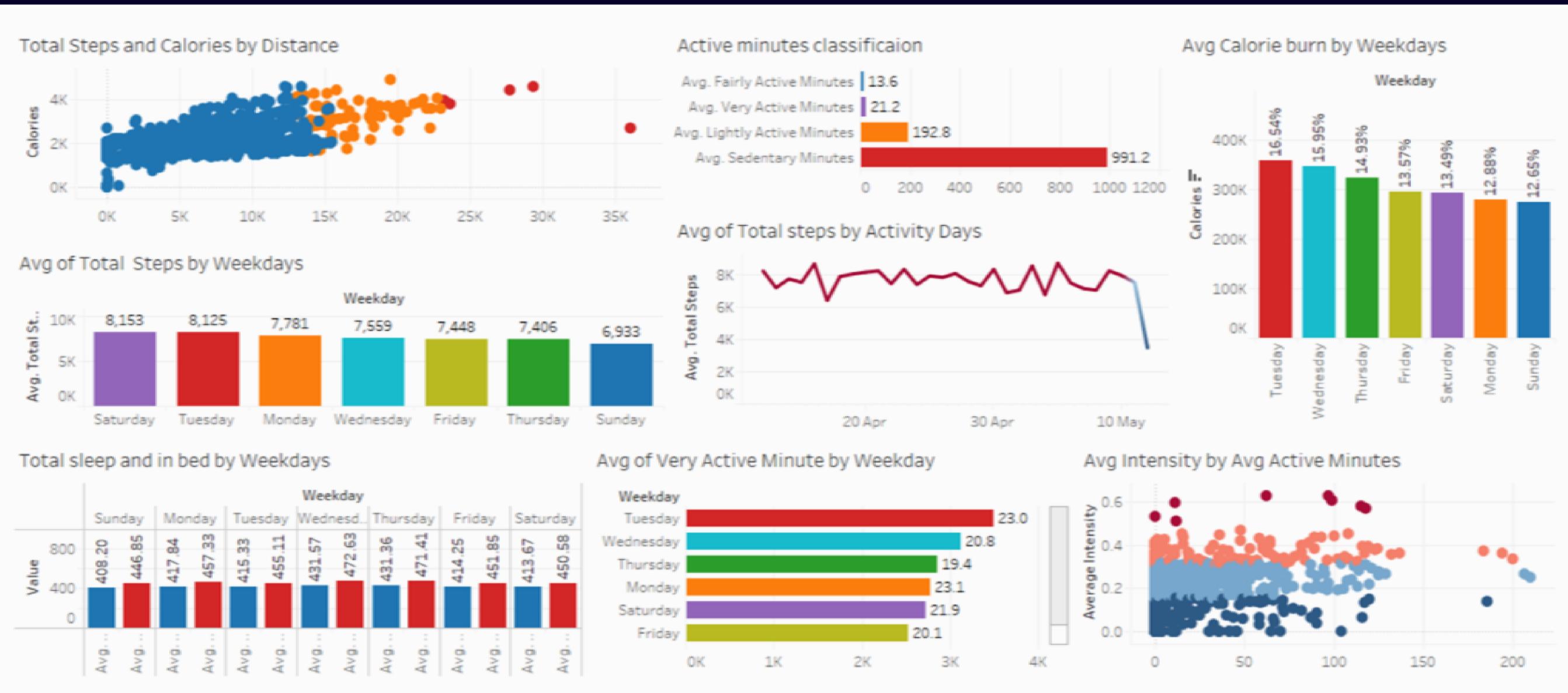
Home Automation

Smart devices are being used to control home appliances, lighting, and security systems.

Virtual Assistance

Many people are now using smart devices to access digital assistants like Amazon's Alexa or Apple's Siri.

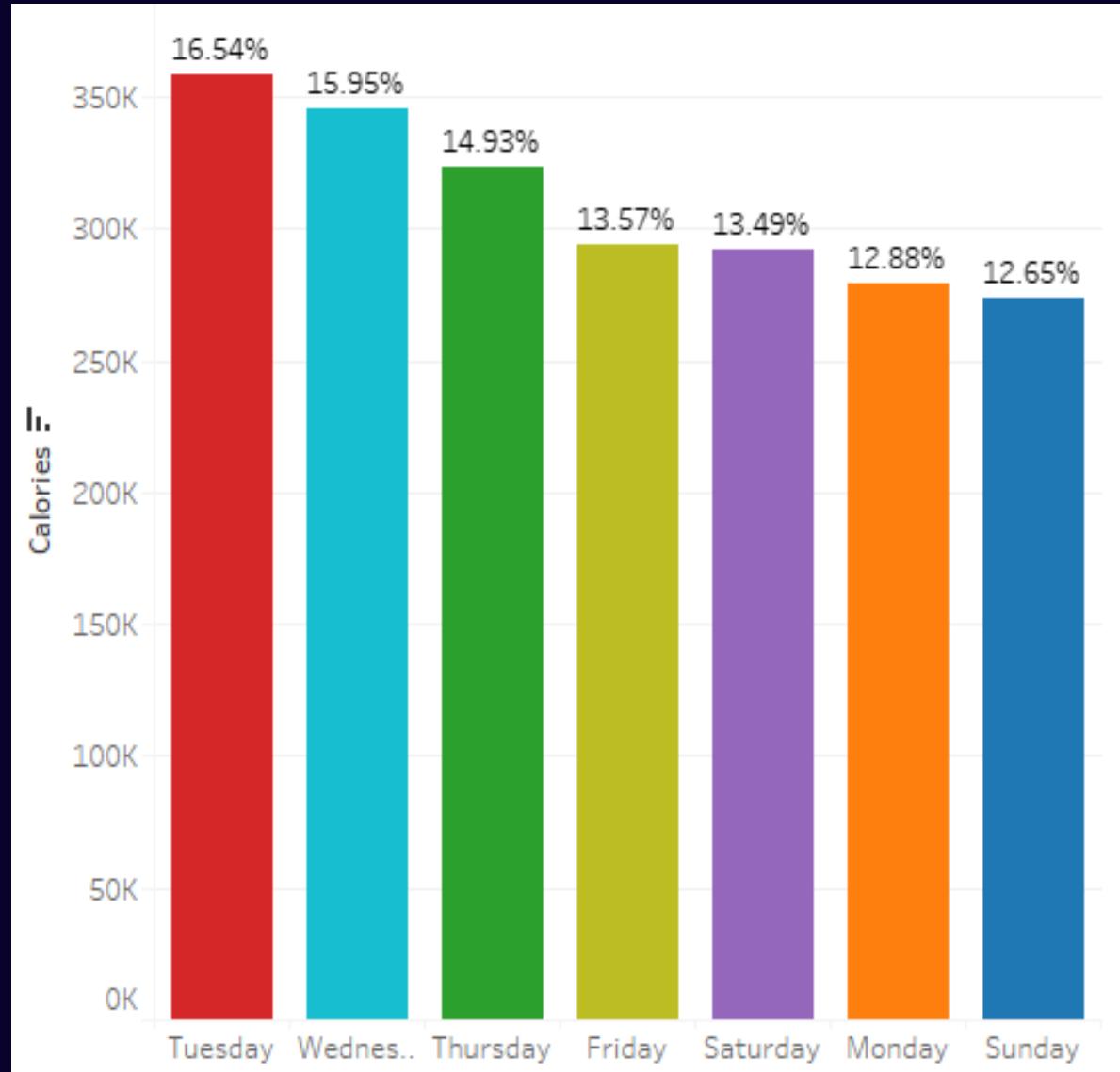
Dashboard



Click Here For Dashboard →



Average Calorie burn by Day of Week



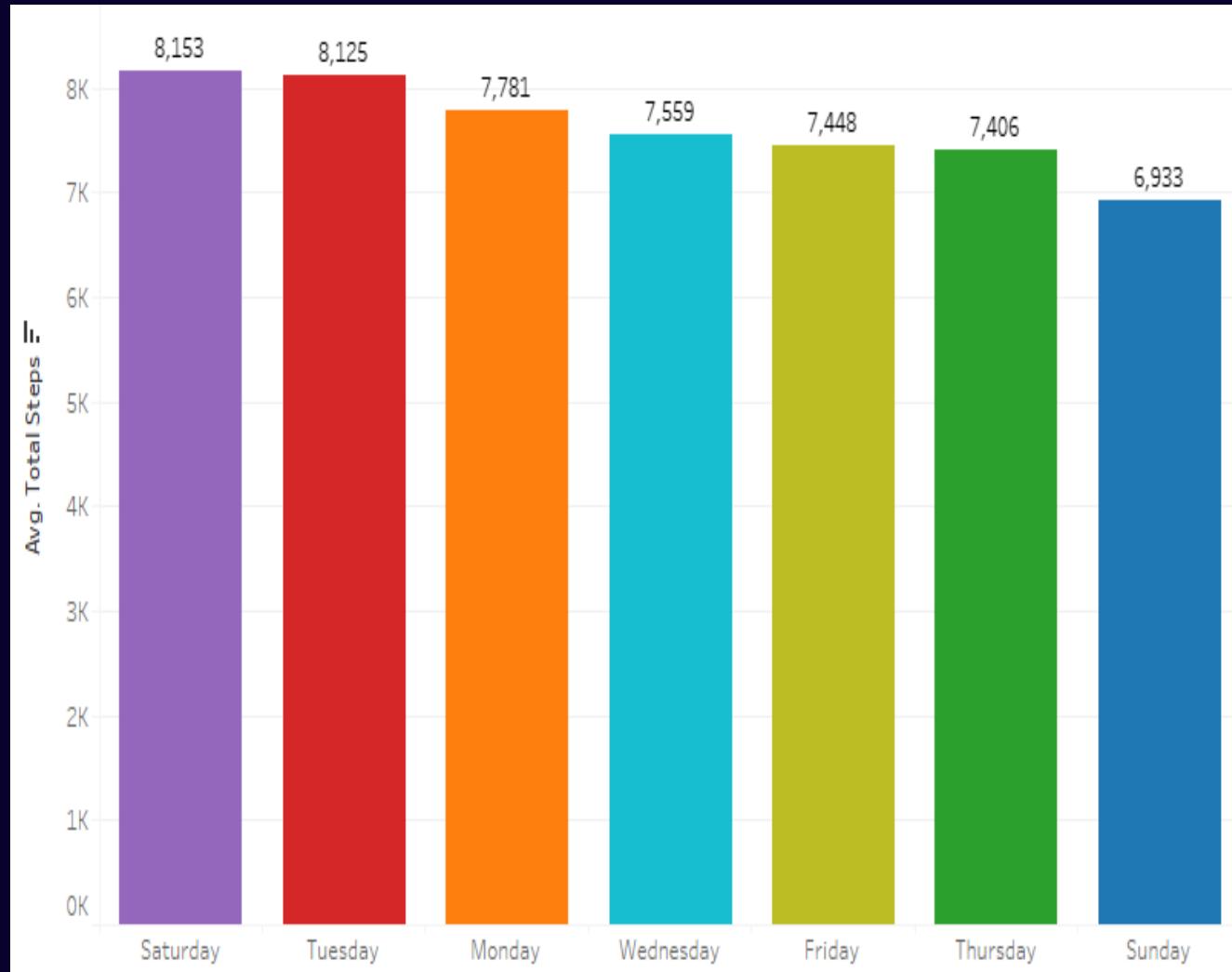
- The data shows that Tuesdays is the day with highest average calorie burn, accounting for **16.54%**.
- On the other hand, Sundays has the lowest average calorie burn at **12.65%** of the total.
- Weekdays show higher physical activity, while weekends show lower activity.

Average Steps Taken From April to May



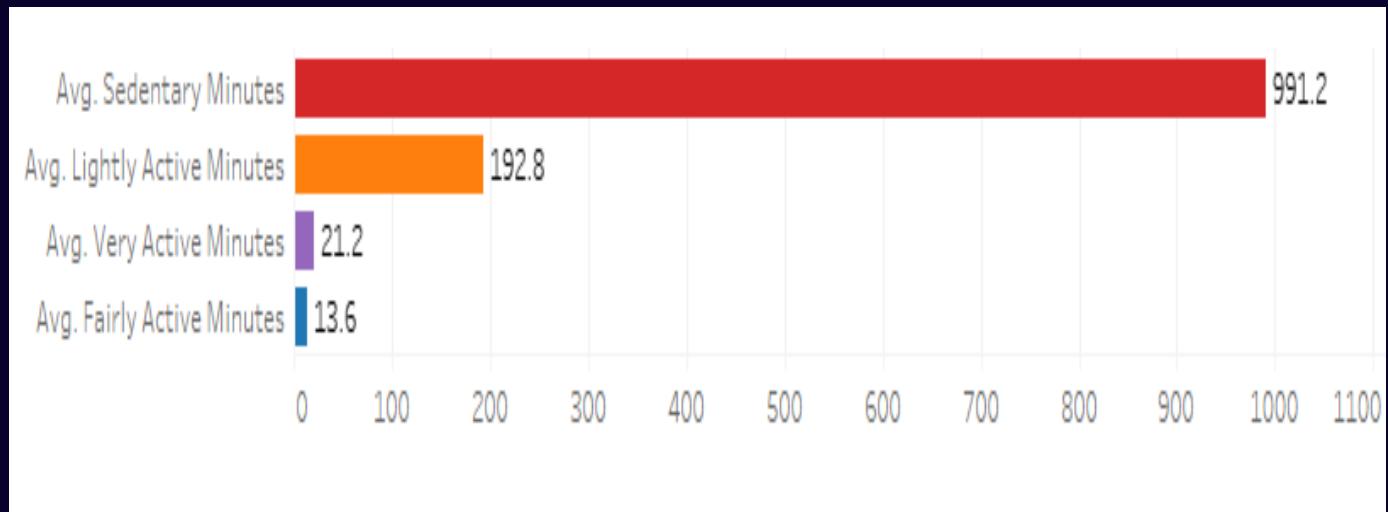
- The data is collected from non-Bellabeat users' devices from April to May 2016.
- Average of Total steps taken declined notably from April to May according to the data analysis.
- In April, the average total steps taken were around **8,000**, while in May, it was less than **4,000**.
- This decline of about **50%** in average total steps taken may be due to weather changes, personal routines, or other external factors.

Average Steps Taken by Day of Week



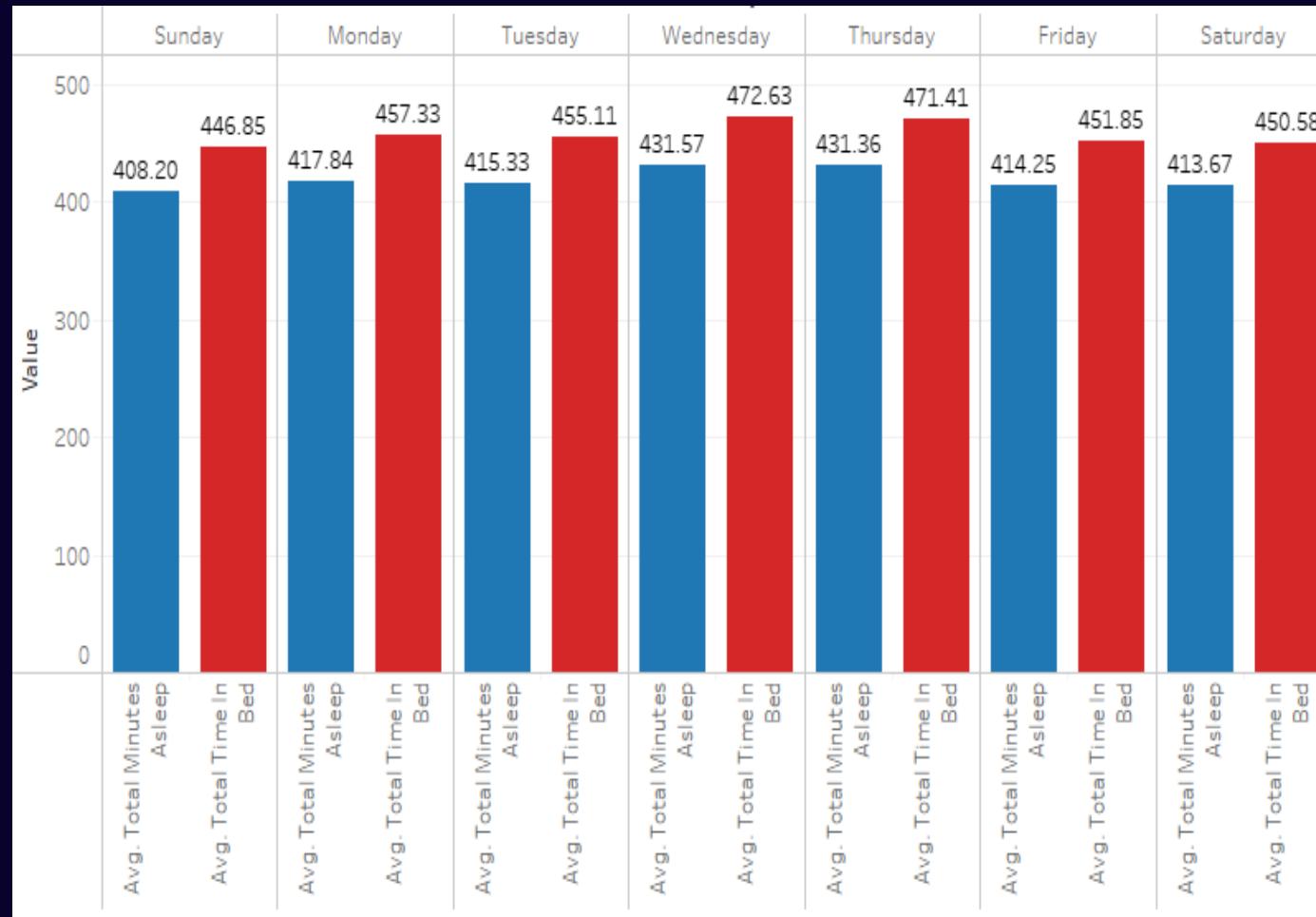
- Based on the analysis, the users walked on an average of **8,153** steps on Saturdays.
- In contrast, on Sundays, customers took the least number of steps, which was about **6,933**.
- Weekend days, especially Sundays, show the lowest average step count based on the data.

Average Steps Taken by Day of Week



- Users were mostly sedentary, spending 991.2 minutes on average in that mode.
- Users' spent an average of only 13.6 minutes in fairly active mode, indicating it was the least frequent behavior observed.
- The data underscores the importance of being active and reducing sedentary time.

Sleep Duration and Bedtime Patterns



- According to the analysis, Users slept longest on Wednesdays (431.7 min) and shortest on Sundays (408.2 min), on average.
- Users spent longest time on bed Wednesdays (472.63 min) and shortest time Sundays (446.85 min).
- Emphasize quality sleep and consistent bedtime patterns for better health and well-being.

Applying Trends to Bellabeat Customers with Leaf



Fitness Tracking

Bellabeat could incorporate more fitness tracking features into their smart wellness tracker leaf, catering to customers' health needs and lifestyle.

Smart Home Integration

Bellabeat could integrate smart home automation features into leaf for a more seamless and stress-free lifestyle.

Voice Assistant

Bellabeat could use voice assistants to provide a more hands-free experience for customers seeking a modern and convenient lifestyle.

Marketing Strategy Influence

Targeted Ads

Data on how consumers use non-Bellabeat smart devices can inform Bellabeat's targeted marketing strategies to reach broader audiences.

Product Design

Features informed by consumer insights may give Bellabeat an advantage in the market and appeal to a wider audience.

Brand Messaging

The value proposition of Bellabeat can be expanded to better fit the modern and convenient lifestyle that consumers are seeking with smart devices.

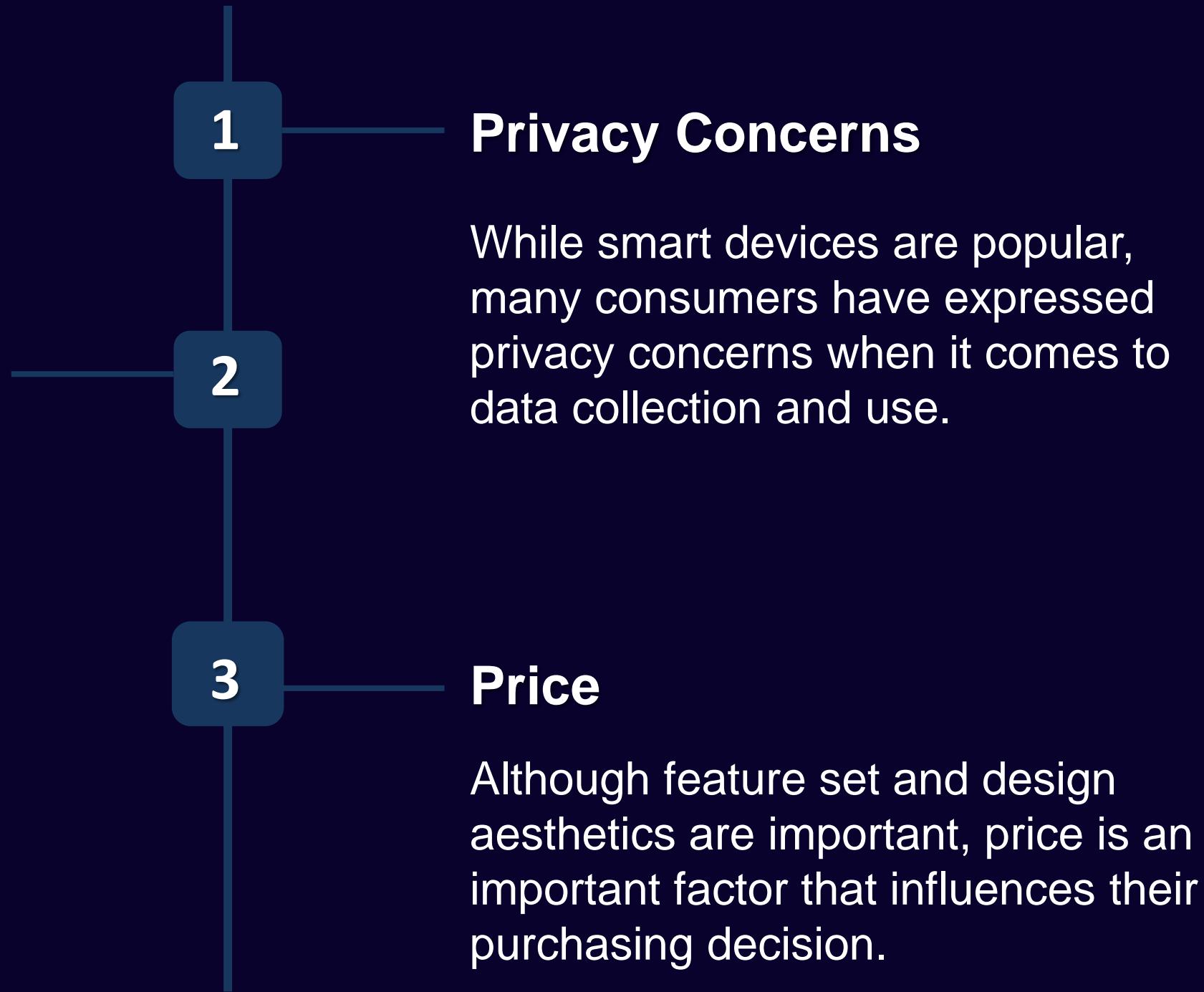
Social Media Campaigns

Bellabeat's marketing can leverage social media platforms to educate target audiences on the functionality and ease of smart devices.

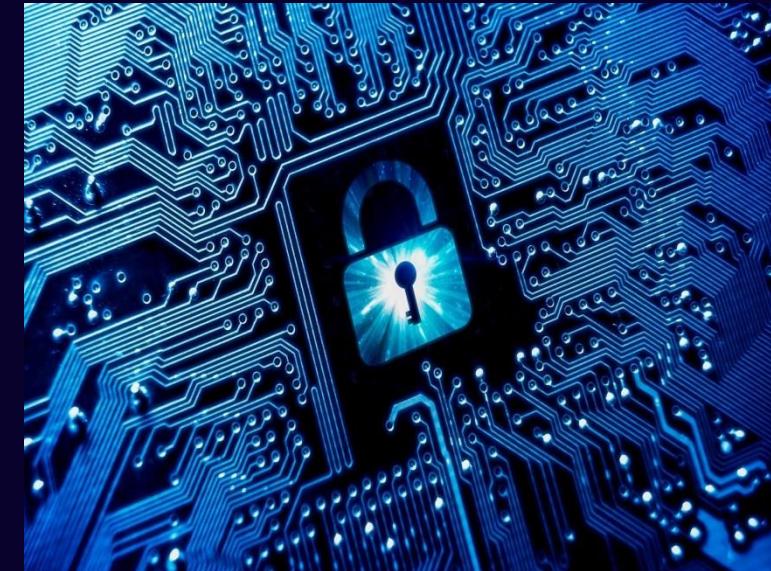
Consumer Behaviour & Preferences

Design Aesthetics

Consumers are now more likely to choose a device that offers competitive features as well as an attractive design.



Bridging the Gap



Demand Generation

Bellabeat could form partnerships with fitness influencers to create demand and drive sales of their new and improved fitness-focused smart device.

Inclusivity

Bellabeat's marketing campaigns could showcase a workforce that is friendly to women interested in technology to create a sense of inclusion and diversity for their female customers.

Privacy

Privacy concerns can also be addressed through transparent communication and proactive privacy features built into the products.

Innovation at Bellabeat : Bellabeat Leaf



Bellabeat is committed to delivering innovative, visually appealing, and functional smart devices for women's health and wellness, designed to meet women's connected health needs in a technology-driven environment and adding the insights gained from the analysis will make it more attractive amongst the target audience.

The Future of Health & Wellness

As the world becomes more technology-driven, it's essential for companies like Bellabeat to stay ahead of the curve to meet the evolving health and wellness needs of their customers, through innovation and customer-focus.



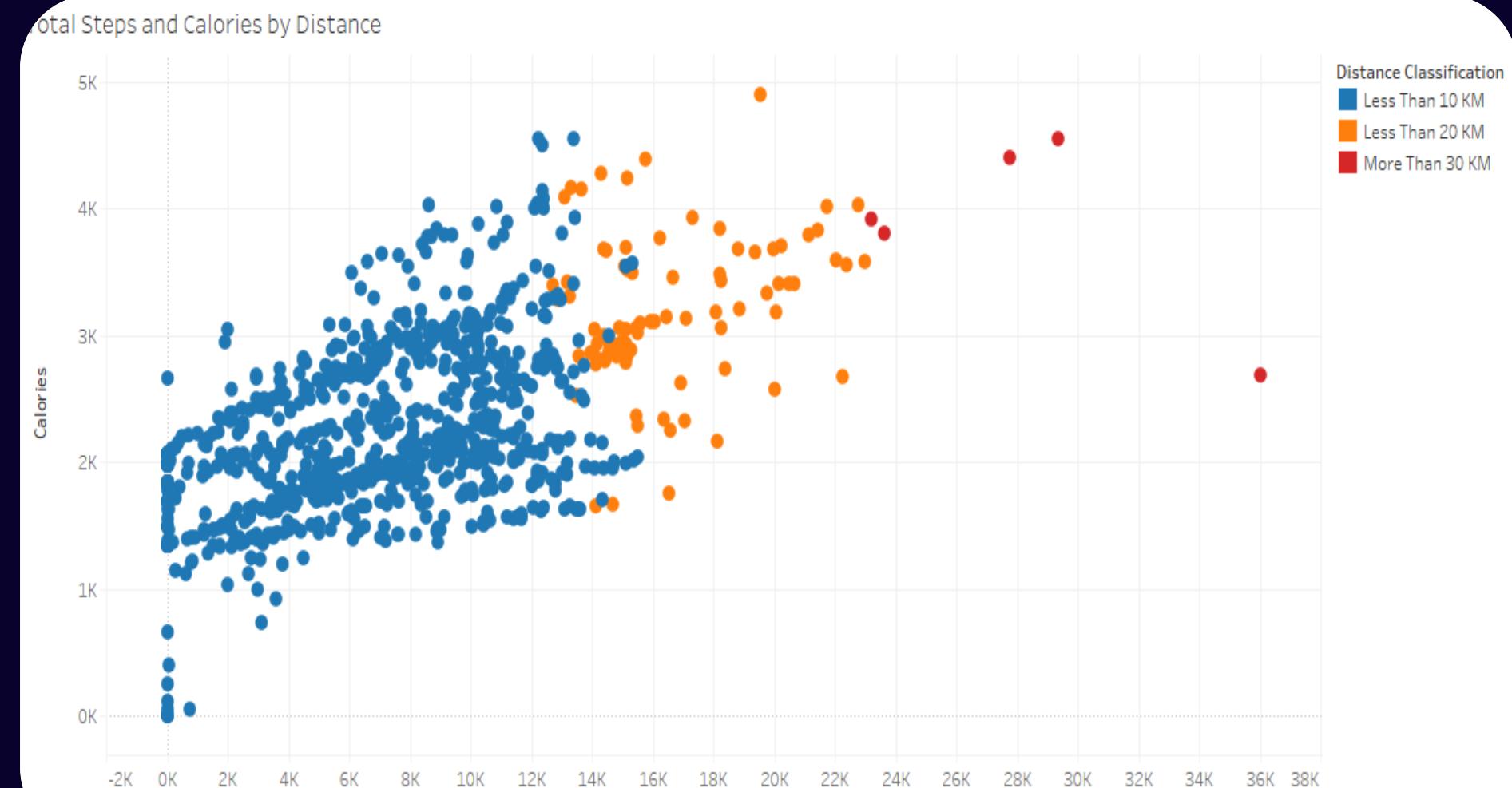
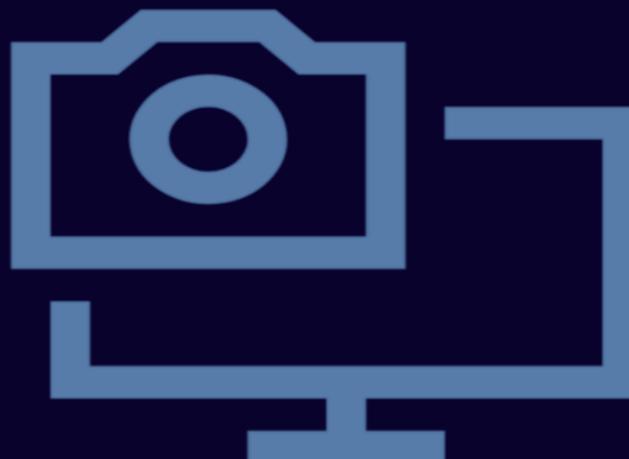
Conclusion



- Promote Leaf's monitoring and personalized goals to target fitness enthusiasts and combat declining activity.
- Emphasize active time and decrease sedentary behavior to promote healthy habits with Leaf.
- Market Leaf's sleep tracking features for improved well-being using sleep pattern data.
- Use marketing strategies to increase brand awareness and attract new Leaf users.

Appendix

Total Steps and Calories by Distance



Steps vs. Calories. Color shows details about Distance Classification. The data is filtered on Action (Weekday), which keeps 7 members.

standardized distance vs steps (Weekday) note A no better fit is step art. note classification distance vs steps standard deviation vs steps

Average Intensity by Average Active Minutes

