

Bellabeat Marketing Analysis Case Study

- Using Smart Device Data to Drive Strategic Insights

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Last Updated: November 04, 2024

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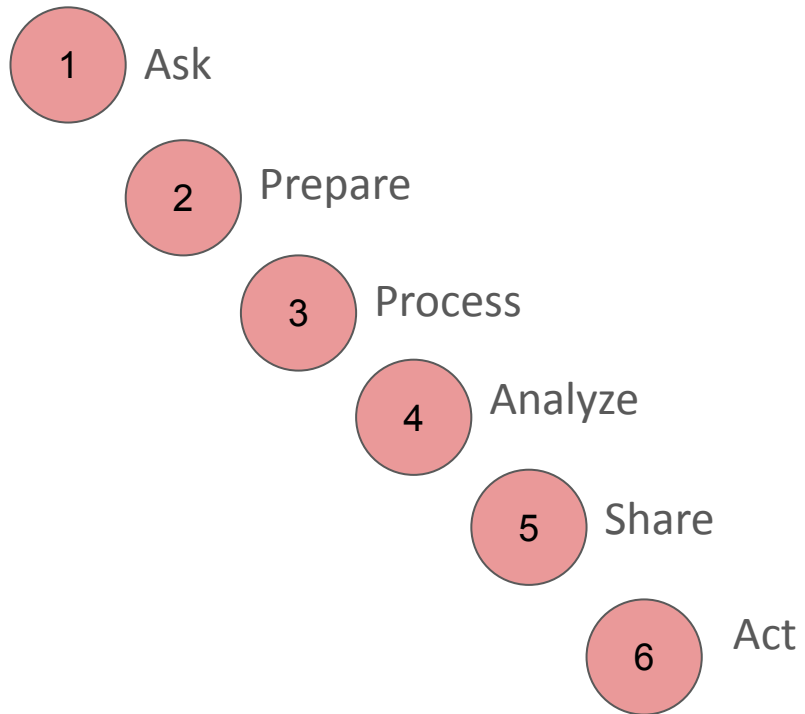
Bellabeat Marketing Analysis Case Study

- Business Task
- Process
- Insights
- Conclusions
- Recommendations

Business Task

To analyze data from non-Bellabeat smart devices, uncovering usage patterns and providing actionable insights to enhance Bellabeat's marketing strategy.

Process



Insights - Sleep

- **Average Sleep Duration:** 7 hours
(Recommended: 7–9 hours).
- **Correlations:**
 - **Positive:** Total minutes asleep ↔ Total time in bed.
 - **Negative:** Sedentary time ↔ Sleep duration.

Min, Average and Max Sleep Hours



Insights - Sleep

- **Sleep Patterns:**
 - 44% of users sleep less than recommended.

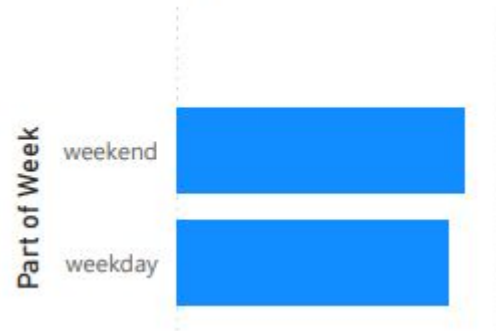
Sleep Time Category by Sleep Time Category



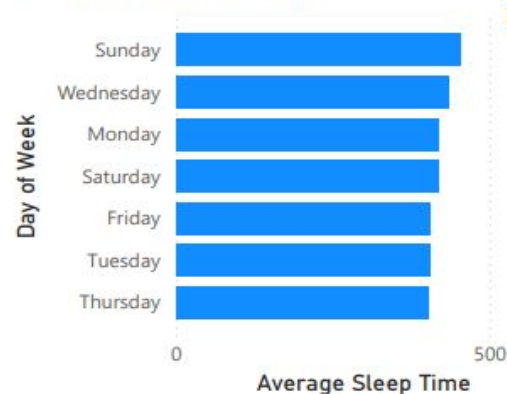
Insights - Sleep

- **Sleep Patterns:**
 - Users sleep more on weekends (highest on Sunday, Wednesday, and Monday).

Sleep Time by Part of Week



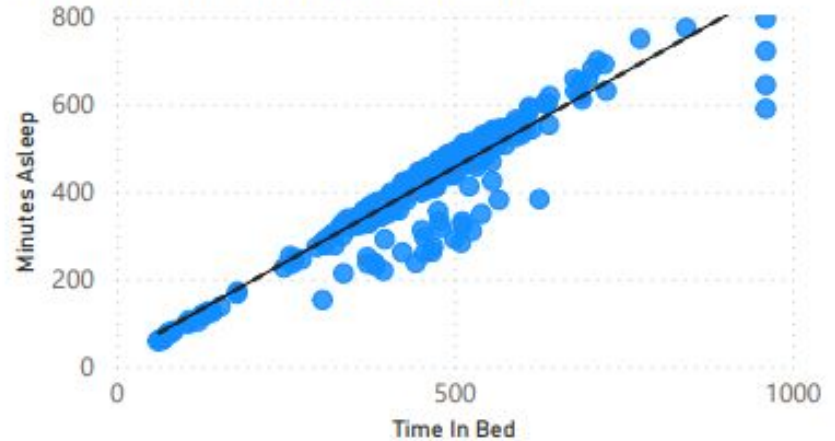
Sleep Time by Day of Week



Insights - Sleep

- **Correlations:**
 - **Positive:** Total minutes asleep ↔ Total time in bed.
 - **Negative:** Sedentary time ↔ Sleep duration.

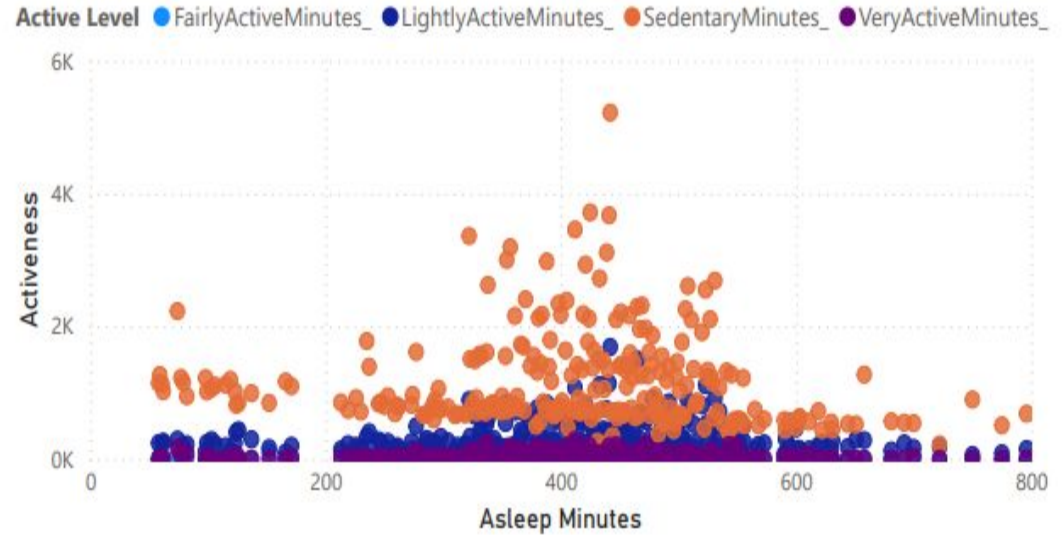
Time In Bed vs Minutes Asleep



Insights - Sleep

- **Correlations:**
 - **Negative:** Sedentary time ↔ Sleep duration.

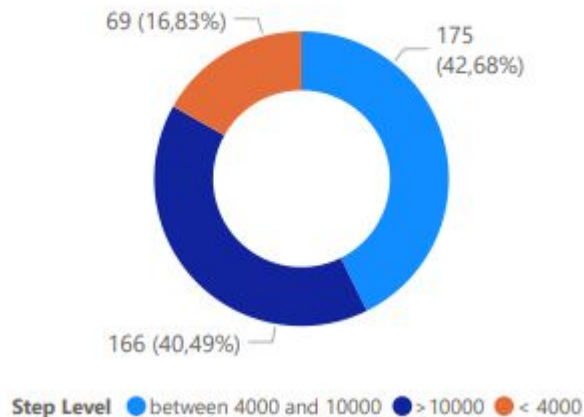
Sleep vs Activeness



Insights - Daily Activity

- **Step Counts:**
 - 16.83% of users take fewer than 4,000 steps daily.
 - 40.49% meet the recommended 10,000+ steps.

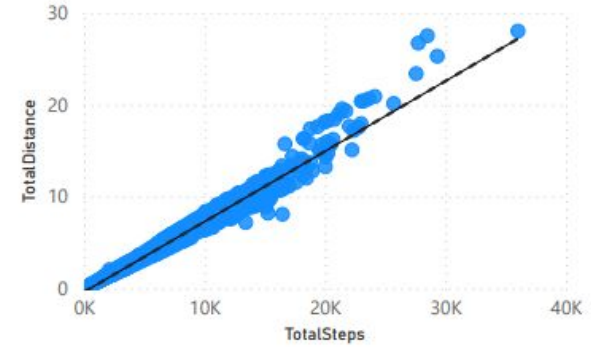
Total Steps by Step Level



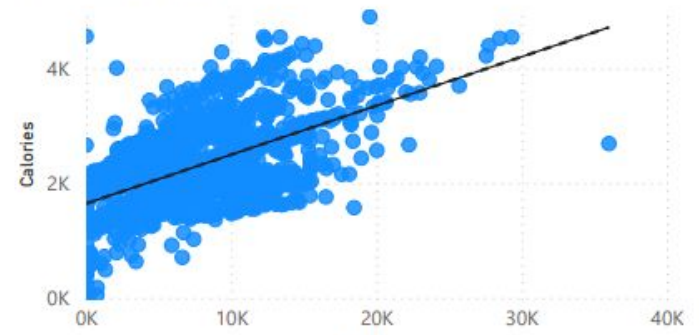
Insights - Daily Activity

- **Correlations:**
 - Steps \leftrightarrow Calories Burned.
 - Steps \leftrightarrow Distance.

Steps vs Distance



Steps vs Calories

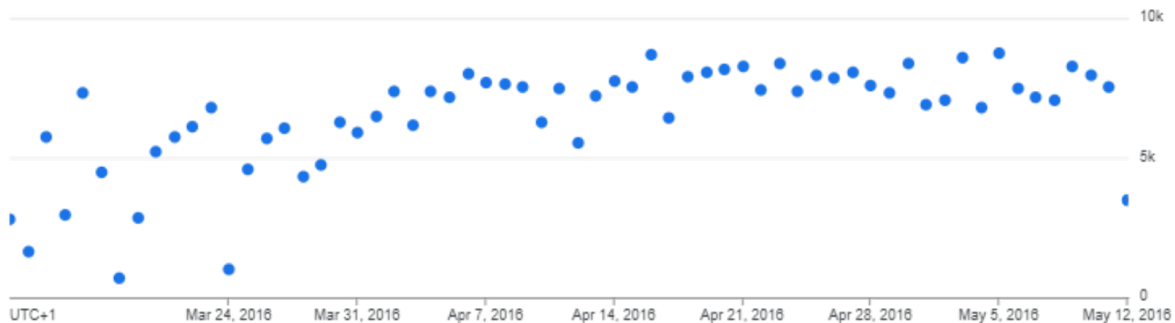


Insights - Daily Activity

- **Trends:**

- Activity increases mid- and end-month but drops on weekends.
- The overall steps increase from March to May.

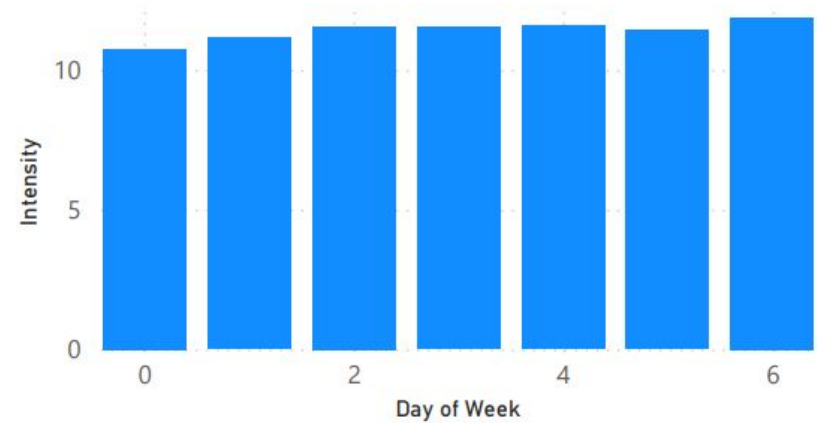
avg_totalsteps by ActivityDate



Insights - Daily Activity

- **Activity Patterns:**
 - Most active on Saturdays; least on Sundays.

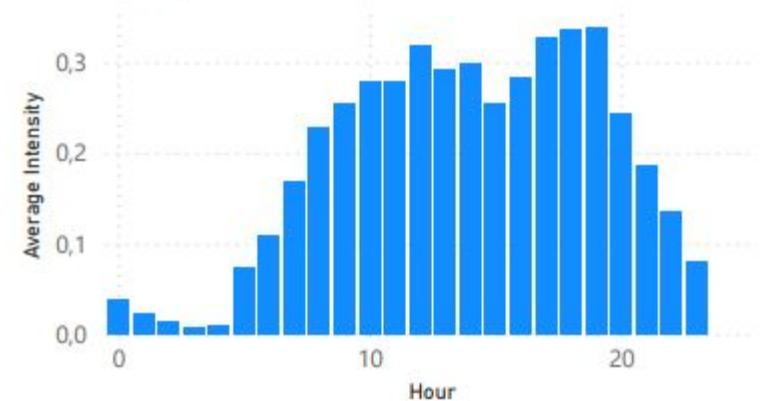
Intensity by Day of Week



Insights - Daily Activity

- **Activity Patterns:**
 - Peak activity hours: **12–2 PM** and **5–7 PM**.

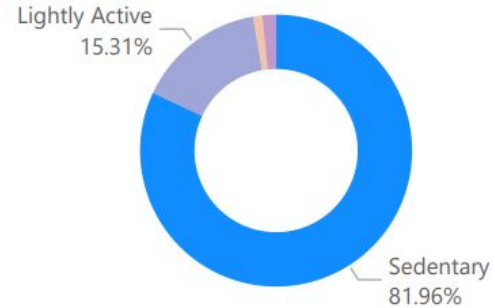
Intensity by Hour



Insights - Daily Activity

- **Activity Patterns:**
 - 81.96% of time spent sedentary;
1.63% in very active movement.

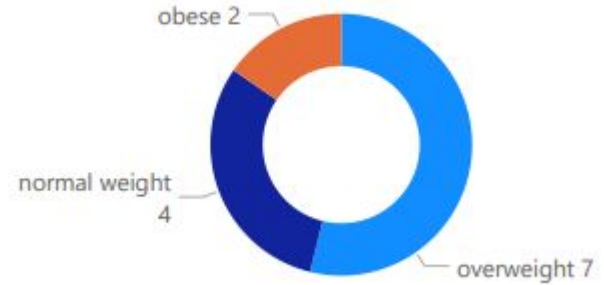
Active Level



Insights - Weight

- **Weight Distribution:**
 - 2 users obese; 7 overweight.
 - 69% have weight concerns.

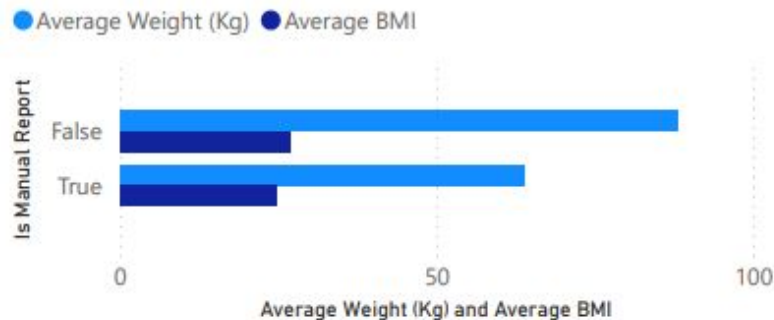
Population by Weight Category



Insights - Weight

- **Segment Differences:**
 - Manually reported weight: Avg. 64 kg (BMI: 24.56).
 - Automatically recorded weight: Avg. 88 kg (BMI: 26.79).

Average Weight (Kg) and Average BMI by Is Manual Report



Conclusions

1. Sleep duration and quality are suboptimal for 44% of users.
2. Sedentary lifestyle prevalent, with limited active time.
3. Step count correlates strongly with calorie burn and distance.
4. Weight concerns are significant, requiring tailored approaches.

Recommendations

1. **Personalized Sleep Coaching:**
 - Use app notifications to suggest healthier bedtime routines.
2. **Activity Challenges:**
 - Launch monthly challenges, e.g., “March into Motion.”
 - Gamify step tracking with rewards for consistency.
3. **Weight Management Support:**
 - Promote automated tracking for convenience.
 - Encourage manual data entry for personalized insights.
4. **Peak Active Hours Campaigns:**
 - Push activity reminders during **12–2 PM** and **5–7 PM**.



Thank you!

Any questions?