**Bellabeat Case Study – Google Data Analytics Capstone**
**Analyst**: Emmanuel Fatungase
**Tools Used**: Google Sheets (Pivot Tables, Charts)
**Project Type**: Exploratory Data Analysis | Marketing Strategy
**Dataset**: Fitbit Tracker Dataset (Kaggle – 30 Users, 31 Days)
**Analysis Workbook:** 📗 **Bellabeat Smart Device Analysis - Case Study**

## Business Task

Bellabeat, a wellness tech company, seeks insights on how people use smart fitness devices. The goal is to understand user behavior and apply these insights to improve Bellabeat's marketing for their Leaf Urban product.

## Data Source

- Public Fitbit dataset from Kaggle (30 users, daily data for activity, sleep, and weight)

- Files used: dailyActivity, sleepDay, dailyCalories, dailySteps, and weightLogInfo

## Data Cleaning

- Removed empty rows and duplicates

- Converted minutes to hours for sleep fields

- Added columns: Hours Asleep, Hours in Bed, and Hours Awake in Bed

- Standardized date formats

- Joined activity and sleep data on date and ID for deeper insights

## Analysis Highlights

### Sleep Trends

- Users average **6.9 hours of sleep**, below the recommended 7–8

- Sleep efficiency **varies** — some users spend long time in bed without sleeping

- Inconsistent sleep tracking suggests engagement drop-offs

### Activity Trends

- Average steps per user: **~7,500**

- VeryActiveMinutes show a stronger correlation with calories burned than total steps

- Most users are sedentary for large portions of the day

**Tracking Behavior**

- Users often stopped logging after a few days

- Stronger engagement = more complete data (especially for weight and sleep)

## Visualizations

- **Bar chart**: Sleep efficiency per user

- **Stacked bar**: Total Steps vs Calories Burned

- **Stacked bar**: Active minutes types per user

## Recommendations for Bellabeat

**Product Focus**: Leaf Urban Smart Jewelry
 A wellness tracker for active women that monitors activity, sleep, stress, and more.

**Marketing Recommendations**:

1. **Promote consistent tracking habits** using streaks and reminders

2. **Highlight the connection** between sleep quality and physical activity

3. **Use app notifications** to reduce sedentary behavior during the day

4. **Show real user success stories** to keep users engaged beyond onboarding