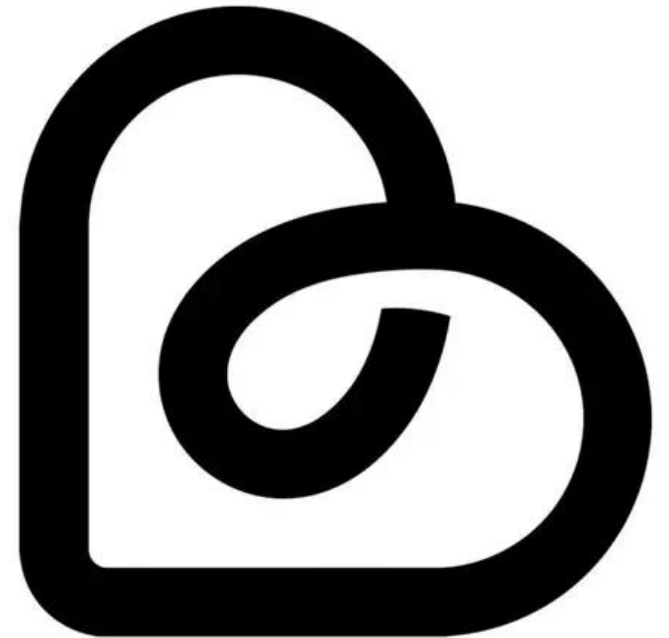

BELLABEAT SMART DEVICE USAGE ANALYSIS

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DATE: 30-09-2025





Business Task

- Objective: Analyze smart device usage to discover behavioral trends
- Goal: Improve product reach, brand positioning, and customer engagement
- Stakeholders: Executives, Marketing, Product Development



Data & Preparation

- Data: Kaggle Fitbit dataset (30 users, daily activity + sleep logs)
- Risks: Small sample, no demographics → potential sampling bias
- Tools: Excel (preparation), BigQuery (SQL), Tableau (visualisation)

Data Processing

- Excel cleaning (dates, duplicates, derived columns)
- SQL checks (row counts, duplicates, date ranges)
- Combined tables for activity + sleep
- Summary metrics generated (steps, calories, sleep trends)

Bellabeat daily activity [Run](#) [Save query](#)

```
26
27 --Average steps per user
28 SELECT
29 Id,
30 ROUND(AVG(TotalSteps),2) AS AverageSteps
31 FROM `sana-project-469323.bellabeat.daily_activity_clean`
32 GROUP BY Id;
```

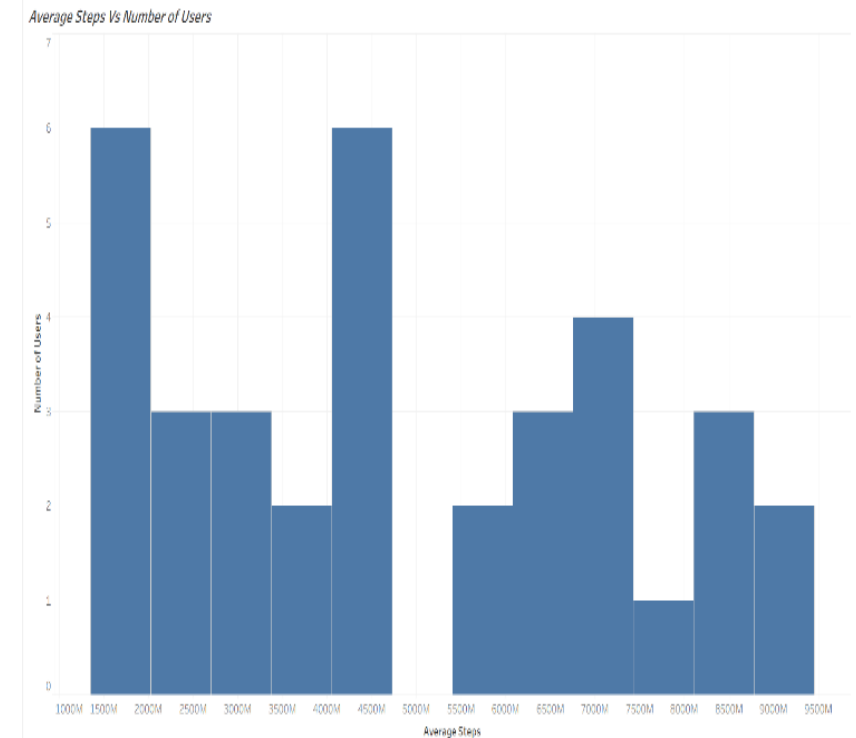
This script will process 131.92 KB when run.

Query results [Save results](#) [Op](#)

Job information	Results	Visualization	JSON
Row	Id	AverageSteps	
1	1503960366	11910.76	
2	1624580081	5106.06	
3	1644430081	7780.93	

Key Analysis Insights

- Steps ↔ Calories: Strong positive correlation
- Sleep ↔ Activity: Weak correlation
- User Segments: Most users 3K–8K steps/day, few >10K
- Engagement: Uneven activity levels across users



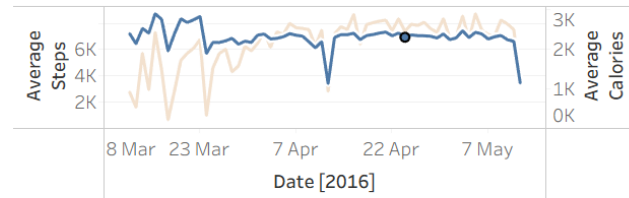


Executive Summary

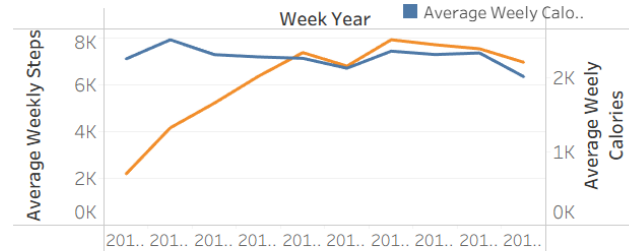
- Step Challenges-Launch challenges to push users closer to 10K daily steps.
- Introduce dashboard in app to show users how activity impacts calorie burn directly
- Personalized Notifications-Send reminders to inactive users and celebrate milestones.
- Promote Bellabeat's sleep-tracking features

Bellabeat data analysis visualization

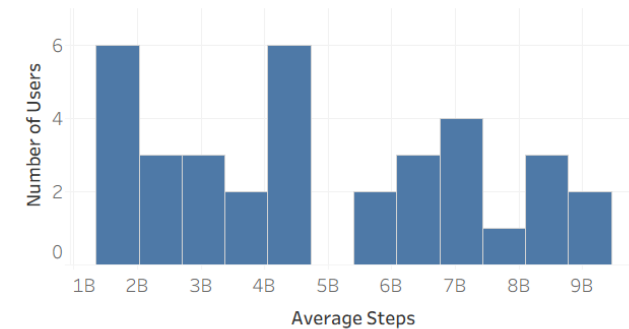
Steps and Calories over time



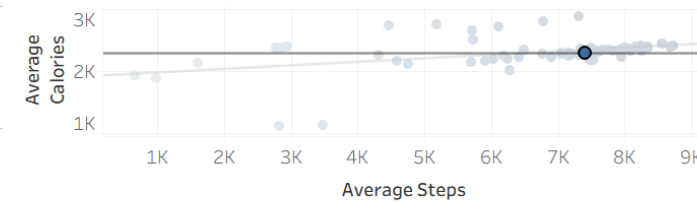
Weekly Steps and Calories



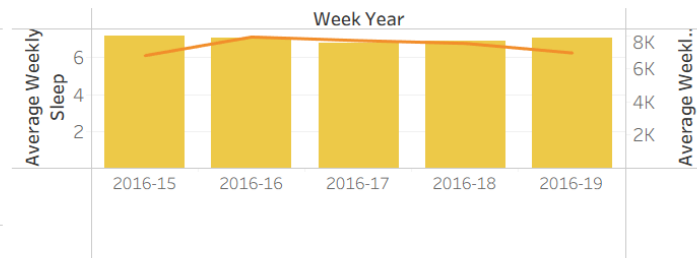
Average Steps Vs Number of Users



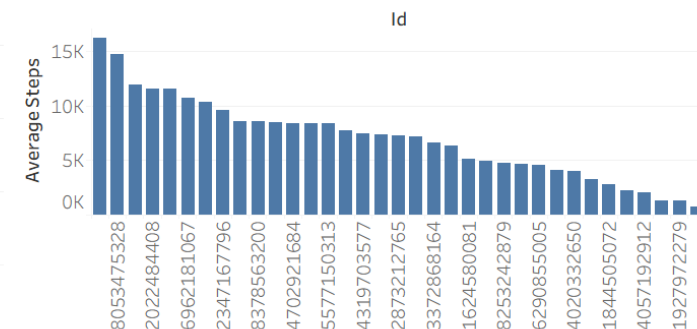
Steps Vs Calories



Weekly Steps and Sleep



Most and least Active User Analysis



Box Plot -Average Steps per User

