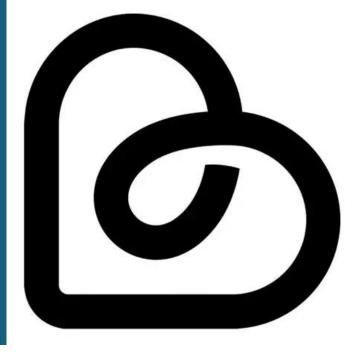
BELLABEAT SMART DEVICE USAGE ANALYSIS

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Business Task

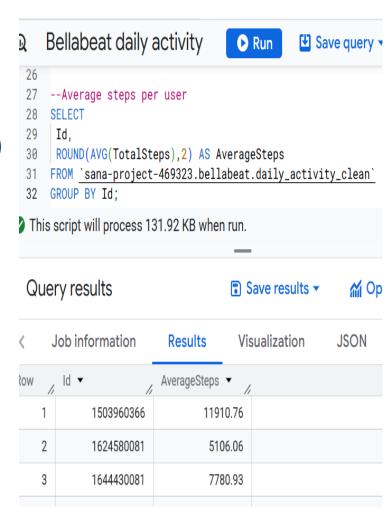
- Objective: Analyze smart device usage to discover behavioral trends
- <u>Goal:</u> Improve product reach, brand positioning, and customer engagement
- Stakeholders: Executives, Marketing, Product Development

Data & Preparation

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

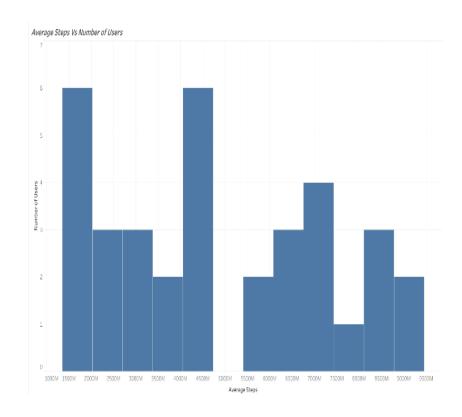
Data Processing

- •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)



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

Filters: Bellabeat data analysis visualization Date Steps and Calories over time Steps Vs Calories Box Plot -Average 12/03/2016 12/05/2016 Steps per User Number of users Average Calories Average Steps 98 Average Calories 17K 13 16K 8877689391 Select Id ОК ✓ (AII) 7 May 8 Mar 23 Mar 22 Apr 15K 1K 2K 1503960366 Date [2016] 8053475328 Average Steps 1624580081 14K Measure Names 1644430081 Weekly Steps and Calories Weekly Steps and Sleep Average Weekly St.. 13K 1844505072 Average Weely Calo.. Week Year Week Year 1927972279 Average Weekly Sleep Average Weekly Steps Average Weekl.. 12K 2022484408 XX Average Weely Calories 6K 2026352035 6К 2022484408 4K 11K 2320127002 4K 2K 2347167796 3977333714 2873212765 Average Steps 2K 2016-16 2016-17 2016-18 2016-19 2016-15 2891001357 0K 3372868164 201.. 201.. 201.. 201.. 201.. 201.. 201.. 201.. 201.. 201.. 3977333714 8K 4020332650 Average Steps Vs Number of Users Most and least Active User Analysis 7К 4057192912 Select Week 6K 8583815059 ✓ (AII) Average Steps Number of Users 2016-10 5K **2016-11 2**016-12 4K **2016-13 2016-14** 3К **2016-15** 1319703577 8378563200 5577150313 624580081 8253242879 **2016-16** 6962181067 372868164 1927972279 2K **2016-17** 1B 2B 3B 4B 5B 6B 7B 8B 9B 1K 2016-18 Average Steps 2891001357 **2016-19**

Bellabeat Case Study-Sana Javed