

# Bellabeat Capstone Case Study

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Tools: R, Tidyverse, ggplot2



## Project Overview

- **Objective:** Identify user health trends
- **Dataset:** 30 users, 2 months (2016, via Fitabase)
- **Tools:** R, Tidyverse, ggplot2

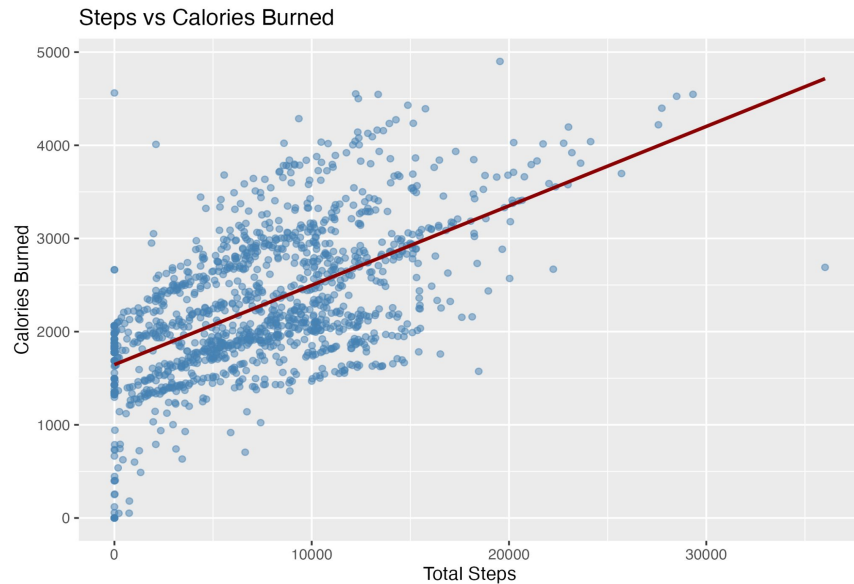


## Data Cleaning

- Combined two monthly exports
- Standardized dates, removed duplicates
- Derived: ActiveMinutes, SedentaryRatio, SleepEfficiency

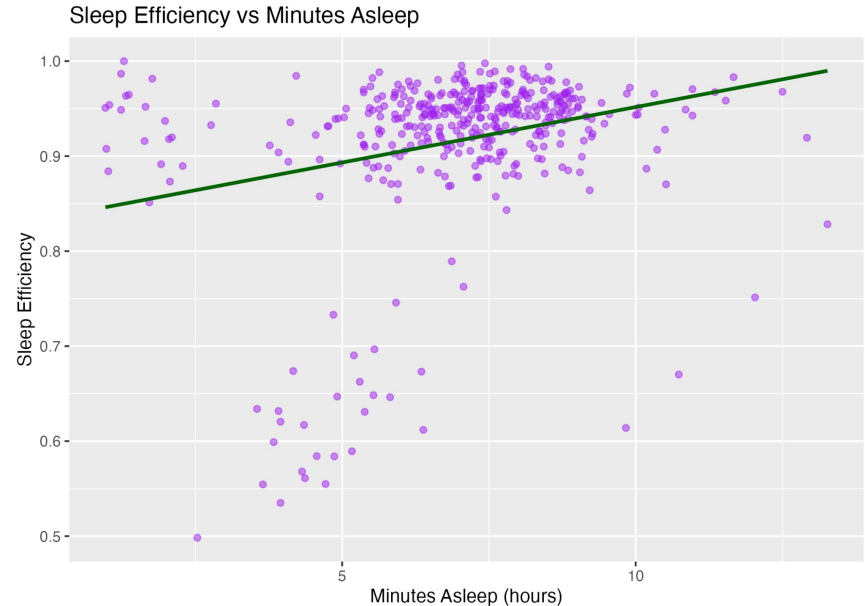
## Key Insights: Activity

- Avg steps/day: ~7,600
- Only ~30% hit 10k/day
- Sedentary > 70% for most users



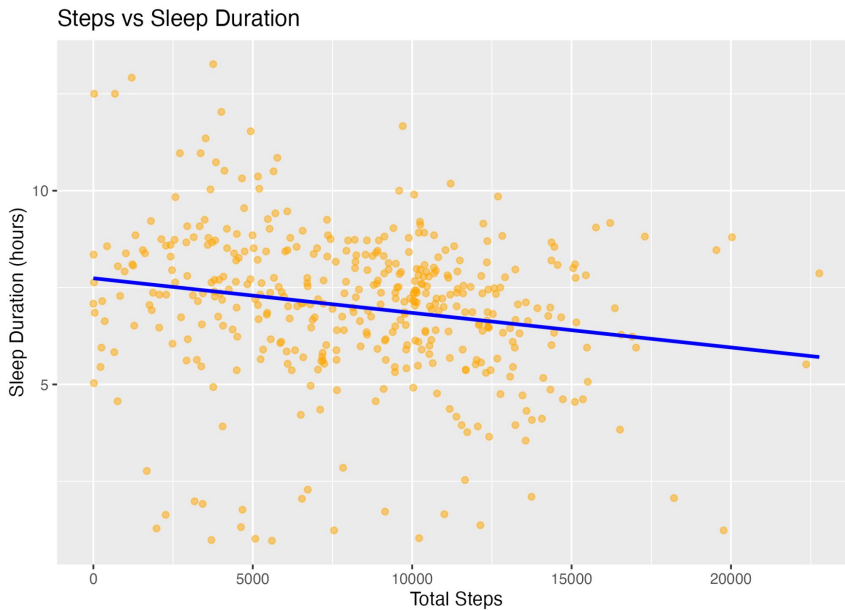
## Key Insights: Sleep

- Avg sleep: ~6.9 hours (<7 hr CDC guideline)
- Efficiency often <85%
- Sleep data only for April-May



## Cross-Analysis: Activity & Sleep

- Weak/negative correlation
- More steps  $\neq$  better rest





## Dataset Limitations

- Small sample (30 users, 2 months)
- Outdated (2016)
- Missing demographics
- No calories, sugar, or A1C data



## Opportunities for Bellabeat

1. 🍏 Nutrition logging (calories + sugar)
2. 💉 Glucose meter integration (e.g., KP Health Ally + OneTouch Verio)
3. 🤰 IVY+ pregnancy expansion (gestational diabetes support)
4. 🌿 Specialized devices (e.g., Leaf Diabetic edition)





## Conclusion

- Users fall short on steps & sleep
- Dataset gaps limit insights
- Opportunity: expand into **nutrition + biomarkers**
- Position Bellabeat at **wellness + digital health** intersection



# Thank You

- Repo: [github.com/adriculous/bellabeat-capstone](https://github.com/adriculous/bellabeat-capstone)
- Portfolio: [data.adrienne.io](https://data.adrienne.io) (coming soon)