# Bellabeat

# Smart Device Usage Analysis

## Data Analyst: Konstantinos Valourdos

## Client/Sponsor: Bellabeat

## Audience: Cofounders, Chief Creative Officer (Urška Sršen), Mathematician (Sando Mur), Marketing Analytics team (your colleagues)

## Purpose:

*Focus on* ***Leaf*** *product, analyse smart device data.* ***Analyze smart device data*** *to gain insight into* ***how consumers*** *are* ***using*** *their* ***non-Bellabeat*** *smart* ***devices.*** *Share insights to* ***guide marketing strategy*** *for the company.*

### [Initial Questions](https://docs.google.com/document/u/0/d/1LHyhe5NpjoEuacre5Ueor2-m0gWYkh54_4e1w7LDdJk/edit) (click here for details)

## Scope / Major Project Activities:

| Activity | Description |
| --- | --- |
| **Prepare Data** | Collect and prepare public Fitbit data along with additional relevant data. Ensure data is in the right format and primed for cleaning. |
| **Process Data** | Clean and format the data by handling missing values, removing duplicates, normalizing data, and ensuring consistency across datasets. Use spreadsheet and Microsoft SQL Server tools. |
| **Analysis of data** | Perform statistical analysis to determine key metrics such as minimum, maximum, mean values, and identify the best and worst features to invest resources in for the device. Use descriptive statistics and data visualization tools. |
| **Identify patterns and relationships** | Identify patterns and relationships within the data using methods such as correlation analysis and clustering. Answer key questions about the subscription model, customer satisfaction, and feature usage. |
| **Data sharing and recommendations** | Share insights and provide actionable recommendations using clear and structured visuals such as charts and graphs. Utilize tools like Tableau or Power BI or Microsoft Office to create comprehensive reports and presentations for stakeholders as seen fit. |

## This project does not include:

* Data analysis on Bellabeat products other than the “Leaf”.
* Data analysis on the subscription model and its retention rate.
* Competitive Analysis, comparing Leaf to competitors products.

## Deliverables:

| Deliverable | Description/ Details |
| --- | --- |
| **Public Fitbit data files** | The .csv and .xlsx file prepared for processing. |
| **Additional data** (if needed) | The .csv and .xlsx file prepared for processing. File will be added to the initial data in (SQL). |
| **Data merging report** (if needed) | A report on the data merging process of the *Public Fitbit data file* and *Additional data*. Including methods and tools (SQL) used to combine Public Fitbit data and additional datasets. |
| **Clean data**   * **report** | Cleaned csv. file ready for analysis. along with a detailed report on the data cleaning process (handling missing values, normalization, etc.), documented clearly on github.. |
| **A usage analysis report** | Analysis report on statistical values such as the most and least used feature. The usage depending on fitness etc. |
| **A feedback analysis report** | An analysis report on customer feedback, highlighting common complaints and compliments, and correlating these findings with usage analysis observations. |
| **Presentation** | A comprehensive high-level presentation summarizing insights and recommendations, utilizing data visualizations to communicate key findings and actionable strategies the marketing analytics team can implement. |

## Schedule Overview / Major Milestones:

| Milestone | Expected Completion Date | Description/Details |
| --- | --- | --- |
| *Data merging and processing* | *12/06/2024* | *A detailed process plan outlining steps for data merging, along with a report on the initial preparation of public Fitbit and additional data before cleaning.* |
| *Data cleaning report* | *19/06/2024* | *A comprehensive report detailing the data cleaning steps, including handling missing values, removing duplicates, and normalizing data. The report will also outline a repeatable data cleaning process using Jupyter Notebook.* |
| *Full Analysis report* | *26/06/2024* | *A detailed analysis report showcasing the results of the usage analysis, customer feedback analysis, and competitive analysis. The report will highlight key metrics, patterns, and insights derived from the data.* |
| *Findings presentation* | *03/07/2024* | *A high-level presentation summarizing the key findings and business insights from the analysis, with recommendations for the marketing strategy. The presentation will utilize data visualizations to effectively communicate the results to stakeholders.* |

## \*Estimated date for completion:

*05/06/2024, Week 4*