CAPSTONE PROJECT

FITNESS Dataset EDA & Dashboard

Using Google Colab & Tableau

DATA ANALYTICS

by

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Clear summary of the Business Task: A concise description of the business task Using datasets that include sleep, heart rate, weight, daily activity, minute-by-minute, and hourly data, the main business job is to obtain meaningful insights from FitBit app usage trends. Through the identification of trends, comprehension of customer implications, and influence on marketing strategy, the study seeks to inform the marketing team. Tableau dashboards that are already in place for particular datasets will improve comprehension, and Python will be used for data cleansing, analysis, and hourly dataset visualization.

Description of Data Sources Used: Sleep logs, heart rate readings, weight records, daily activity summaries, minute-by-minute information, and hourly data collected from FitBit users are among the datasets. A wide range of user interactions with the FitBit app are covered by these datasets. A more detailed understanding will be aided by the individual dashboards for each dataset, which are linked below.

Documentation of Data Cleaning or Manipulation: Handling missing values, dealing with outliers, and preparing data for analysis are all part of the data cleaning procedure, which is described in depth in Python. Transparency and repeatability are ensured by the detailed instruction manual. Furthermore, the alterations done to the source datasets are thoroughly recorded.

Summary of the Analysis: Each dataset will be analyzed using Python to provide insights into daily activity levels, heart rate trends, sleep habits, and weight management. Important discoveries from hourly and minute-by-minute data will be combined to provide a comprehensive picture of FitBit app usage trends.

Supporting Visualizations and Key Findings: The hourly dataset in particular will require the usage of Python to produce the accompanying visualizations to the analytic results. We will use the pre-existing Tableau dashboards for each dataset (links below) to create a visual story that will help with trend analysis. For improved stakeholder comprehension, graphical representations of the key findings will be provided.

High-Level Content Recommendations: Based on the research and taking into account the unique characteristics of each dataset, concrete suggestions will be developed. These suggestions, which are aimed at enhancing user engagement and experience with the FitBit app, will be customized for particular client categories. The dataset's insights will direct strategic choices about advertising, characteristics of products, and communication tactics.

Tools Used:

- Python for utilized for the purposes of data cleaning, analysis, and dataset visualization.
- Tableau for the purpose of building dashboards specific to each dataset.

Dashboards Links using Tableau:

- **Daily Activity Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/DailyActivityDataDashboard/Dashboard1

- **Weight Log Info Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/WeightLogDashboard_17239144550820/Dashboard1

- **Heart Rate Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/HeartRateDashboard_17239753151650/Dashboard1

- **Sleep Activity Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/SleepActivityDashboard/Dashboard

- **Minute Activity Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/MinuteActivityDashboard_17239830072940/Dashboard1

- **Hourly Activity Dashboard**

  https://public.tableau.com/app/profile/athiya.fathima7006/viz/HourlyActivityData/Dashboard