

Wearable Data Documentation

1. User_ID

- **Description:** A unique identifier assigned to each user.
 - **Type:** String
 - **Format:** U_XXXXX (e.g., U_00001)
 - **Represents:** The individual user of the wearable device.
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2. Age

- **Description:** Represents the age of the user.
 - **Type:** Integer
 - **Range:** 10 to 85
 - **Represents:** The age in years of the wearable device's user.
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3. Gender

- **Description:** Represents the gender of the user.
 - **Type:** String
 - **Values:** Male, Female, Other
 - **Represents:** The biological or chosen gender of the user.
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4. Weight

- **Description:** The weight of the user.

- **Type:** Float
 - **Range:** 30kg to 150kg
 - **Represents:** The body weight of the user in kilograms.
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5. Height

- **Description:** The height of the user.
 - **Type:** Float
 - **Range:** 140cm to 200cm
 - **Represents:** The height of the user in centimeters.
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6. Medical_Conditions

- **Description:** Medical conditions the user may have.
 - **Type:** String
 - **Values:** Diabetes, Hypertension, None
 - **Represents:** Existing health conditions of the user.
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7. Medication

- **Description:** Indicates if the user is taking any prescribed medication.
 - **Type:** String
 - **Values:** Yes, No
 - **Represents:** Whether the user is under medication.
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8. Smoker

- **Description:** Indicates if the user smokes.
 - **Type:** String
 - **Values:** Yes, No
 - **Represents:** Smoking habits of the user.
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9. Alcohol_Consumption

- **Description:** User's alcohol consumption level.
 - **Type:** String
 - **Values:** None, Moderate, Heavy
 - **Represents:** Frequency and volume of alcohol consumption by the user.
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10. Timestamp

- **Description:** The exact date and time the data was recorded.
 - **Type:** DateTime
 - **Format:** YYYY-MM-DD HH:MM:SS
 - **Represents:** The instance when the data was captured.
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11. Day_of_Week

- **Description:** Day of the week derived from the timestamp.
- **Type:** String
- **Values:** Monday to Sunday
- **Represents:** The weekday corresponding to the timestamp.

12. Sleep_Duration

- **Description:** Total hours the user slept.
- **Type:** Float
- **Range:** 4 to 10 hours
- **Represents:** Duration of sleep for the user in a 24-hour period.

13. Deep_Sleep_Duration

- **Description:** Duration of deep sleep.
- **Type:** Float
- **Range:** 0.5 hours up to total sleep duration
- **Represents:** The time spent by the user in a deep sleep phase.

14. REM_Sleep_Duration

- **Description:** Duration of REM sleep.
- **Type:** Float
- **Range:** Derived from total sleep duration minus deep sleep duration
- **Represents:** The time spent by the user in the REM sleep phase.

15. Wakeups

- **Description:** Number of times the user woke up during sleep.
- **Type:** Integer
- **Range:** 0 to 5

- **Represents:** Disturbances during sleep.
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16. Snoring

- **Description:** Indicates if the user snored during sleep.
 - **Type:** String
 - **Values:** Yes, No
 - **Represents:** Snoring behavior during sleep.
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17. Heart_Rate

- **Description:** User's heart rate.
 - **Type:** Integer
 - **Range:** 50 to 180 bpm
 - **Represents:** The number of heartbeats per minute.
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18. Blood_Oxygen_Level

- **Description:** Oxygen saturation level in the blood.
 - **Type:** Float
 - **Range:** 90% to 100%
 - **Represents:** The percentage of oxygen-saturated hemoglobin compared to the total hemoglobin in the blood.
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19. ECG

- **Description:** Electrocardiogram reading.
 - **Type:** String
 - **Values:** Normal, Abnormal
 - **Represents:** The electrical activity of the heart.
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20. Steps

- **Description:** Number of steps taken by the user.
 - **Type:** Integer
 - **Range:** 0 to 20,000
 - **Represents:** Physical activity level in terms of walking or running.
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21. Calories_Burned

- **Description:** Estimated calories burned based on steps.
 - **Type:** Float
 - **Calculation:** Steps * 0.05
 - **Represents:** Energy expended during physical activities.
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22. Distance_Covered

- **Description:** Estimated distance covered based on steps.
- **Type:** Float
- **Calculation:** Steps * 0.0008 (Average stride length considered)
- **Represents:** The distance covered by walking or running.

23. Exercise_Type

- **Description:** The type of exercise activity performed by the user.
- **Type:** String
- **Values:** Running, Yoga, Strength Training, None
- **Represents:** Different forms of exercise.

24. Exercise_Duration

- **Description:** Duration of the exercise performed.
- **Type:** Float
- **Range:** 0 to 2 hours
- **Represents:** Time spent on a particular exercise activity.

25. Exercise_Intensity

- **Description:** Intensity of the exercise.
- **Type:** String
- **Values:** Low, Moderate, High
- **Represents:** The vigor of the exercise activity.

26. Calories_Intake

- **Description:** Estimated calorie intake of the user.
- **Type:** Float
- **Range:** 500 to 5000 kcal

- **Represents:** Total energy intake from food and beverages.
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27. Water_Intake

- **Description:** Volume of water consumed by the user.
 - **Type:** Float
 - **Range:** 0.5 to 5 liters
 - **Represents:** Hydration level of the user.
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28. Stress_Level

- **Description:** User's perceived level of stress.
 - **Type:** String
 - **Values:** Low, Moderate, High
 - **Represents:** The mental state concerning stress.
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29. Mood

- **Description:** User's mood.
 - **Type:** String
 - **Values:** Happy, Sad, Neutral, Anxious
 - **Represents:** The emotional state of the user.
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30. Skin_Temperature

- **Description:** Temperature of the user's skin.
 - **Type:** Float
 - **Range:** 32 to 37 degrees Celsius
 - **Represents:** External body temperature.
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31. Ambient_Temperature

- **Description:** Surrounding or environmental temperature.
 - **Type:** Float
 - **Range:** 0 to 40 degrees Celsius
 - **Represents:** The temperature of the environment in which the user is present.
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32. Battery_Level

- **Description:** Battery charge level of the wearable device.
 - **Type:** Float
 - **Range:** 0% to 100%
 - **Represents:** Remaining battery life of the wearable device.
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33. Body_Fat_Percentage

- **Description:** Estimated body fat percentage.
 - **Type:** Float
 - **Range:** 5% to 40%
 - **Represents:** Proportion of fat in the body.
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34. Muscle_Mass

- **Description:** Estimated muscle mass in kilograms.
 - **Type:** Float
 - **Range:** 20 to 90 kg
 - **Represents:** Muscle composition of the user's body.
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35. Altitude

- **Description:** Altitude where the user is located.
 - **Type:** Float
 - **Range:** 0 to 5,000 meters
 - **Represents:** Vertical distance from sea level.
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36. UV_Exposure

- **Description:** Duration of exposure to ultraviolet (UV) rays.
 - **Type:** Float
 - **Range:** 0 to 8 hours
 - **Represents:** Time spent under direct sunlight or UV sources.
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37. Notifications_Received

- **Description:** Number of notifications received on the wearable device.
- **Type:** Integer
- **Range:** 0 to 100
- **Represents:** Interaction or interruptions the user receives on their wearable device.

38. Screen_Time

- **Description:** Time spent using the wearable's screen.
- **Type:** Float
- **Range:** 0 to 5 hours
- **Represents:** Duration of active device usage.

39. Health_Score

- **Description:** A holistic score based on various metrics to represent the user's health.
- **Type:** Float
- **Range:** 0 to 100
- **Represents:** Overall health status based on multiple parameters.

40. Anomaly_Flag

- **Description:** A binary flag indicating any anomaly in the data.
- **Type:** Binary
- **Values:** 0 (No anomaly), 1 (Anomaly detected)
- **Represents:** Data integrity or potential issues in metrics recording.