Link: https://www.kaggle.com/datasets/uom190346a/sleep-health-and-lifestyle-dataset/data

Variables:

Person ID: An identifier for each individual.

Gender: The gender of the person (Male/Female).

Age: The age of the person in years.

Occupation: The occupation or profession of the person.

Sleep Duration (hours): The number of hours the person sleeps per day.

Quality of Sleep (scale: 1-10): A subjective rating of the quality of sleep, ranging from 1 to 10.

Physical Activity Level (minutes/day): The number of minutes the person engages in physical activity daily.

Stress Level (scale: 1-10): A subjective rating of the stress level experienced by the person, ranging from 1 to 10.

BMI Category: The BMI category of the person (e.g., Underweight, Normal, Overweight).

Blood Pressure (systolic/diastolic): The blood pressure measurement of the person, indicated as systolic pressure over diastolic pressure.

Heart Rate (bpm): The resting heart rate of the person in beats per minute.

Daily Steps: The number of steps the person takes per day.

Sleep Disorder: The presence or absence of a sleep disorder in the person (None, Insomnia, Sleep Apnea).

Amount Data -

Type of Data - Fitbit example

Link:<https://www.kaggle.com/datasets/aleespinosa/apple-watch-and-fitbit-data/data?select=aw_fb_data.csv>

Apple watch series 2 and Fitbit Charge HR2

Variables: activity class:lying, sitting, walking self-paced, 3 METS, 5 METS, and 7 METS. Minute-by-minute heart rate, steps, distance, and calories

Amount of Data:

Has 3 files one combined data set of both apple watch and fit bit

other 2 are separate datasets for apple and fitbit watches

Combined file has 20 columns

18 columns in apple watch data set

18 columns in fitbit data set

Link:<https://www.kaggle.com/datasets/arashnic/fitbit>

Fitbit Data

Columns:15 columns (Only fitbit data for 30 users)

ID:

Activity Date:

Total Steps:

Total Distance:

Tracker:

Logged Activites:

Very Active Distance:

Moderately Active Distance:

Light Activity Distance:

Sedentary Active Distance:

Heart Rate:hourly calories:

Minute sleep:

Minute steps:

Heart Beat ECG Data

<https://paperswithcode.com/dataset/ecg5000>

Its a 20 hour long heart beat data

Link - <https://kaggle.com/datasets/danagerous/sleep-data>

Features -

Start

End

Sleep quality

Time in bed

Wake up

Sleep Notes

Heart rate

Activity (steps) - not many columns w activity

Link: <https://www.kaggle.com/datasets/danagerous/sleep-data>

Features:

Month

DATE

SLEEP SCORE - based on FitBit app

HOURS OF SLEEP - how many hours spent asleep

REM SLEEP - % of sleep spent in REM

DEEP SLEEP - % of sleep spent in Deep

HEART RATE BELOW RESTING - % of heart rate below resting

SLEEP TIME - Sleep and wake time

Link:

<https://www.kaggle.com/datasets/uom190346a/sleep-and-health-metrics>

Features:

* **Heart Rate Variability**: Simulated variability in time intervals between heartbeats.
* **Body Temperature**: Artificially generated body temperature in degrees Celsius.
* **Movement During Sleep**: Synthetic data on the amount of movement while sleeping.
* **Sleep Duration Hours**: Total hours of sleep generated through simulation.
* **Sleep Quality Score**: A synthetic score representing the quality of sleep.
* **Caffeine Intake (mg)**: Amount of simulated caffeine consumption in milligrams.
* **Stress Level**: An index of simulated stress levels.
* **Bedtime Consistency**: Simulated consistency of bedtime routine.
* **Light Exposure Hours**: Synthetic hours of light exposure during the day.

Fitbit Data From another User

<https://www.kaggle.com/datasets/arashnic/fitbit/data>

Link <https://www.kaggle.com/datasets/damirgadylyaev/more-than-4-years-of-steps-and-sleep-data-mi-band/data?select=02_Sleep.csv>

Features:

date

Date

deepSleepTime

Deep sleep [minutes]

shallowSleepTime

Shallow sleep [minutes]

wakeTime

Time I have been awake between sleeps [minutes]

start

Time when I fell asleep

stop

Time when I woke up

date

Date

steps

Number of steps

distance

The distance covered (meters)

runDistance

The distance covered while running (meters)

calories

Calories burned

Fitbit Sleep Score Data

Link: <https://www.kaggle.com/datasets/mbalos/fitbit-sleep-score-data>

timestamp

overall\_score

revitalization\_score

deep\_sleep\_in\_minutes

resting\_heart\_rate

Restlessness

**WHOOP API:** <https://developer.whoop.com/api/>

Features -

* read:recovery - Read Recovery data, including score, heart rate variability, and resting heart rate.
* read:cycles - Read cycles data, including day Strain and average heart rate during a physiological cycle.
* read:workout - Read workout data, including activity Strain and average heart rate.
* read:sleep - Read sleep data, including performance % and duration per sleep stage.
* read:profile - Read profile data, including name and email.
* read:body\_measurement - Read body measurements data, including height, weight, and max heart rate.

SLEEP EDF DATABASE: <https://www.physionet.org/content/sleep-edfx/1.0.0/>

Variables - sleep recordings, containing EEG, EOG, chin EMG, and event markers. Some records also contain respiration and body temperature.

National Sleep Research Resource:

<https://www.ncbi.nlm.nih.gov/projects/gap/cgi-bin/study.cgi?study_id=phs003457.v1.p2>

Variables -

- Epworth Sleepiness Scale

- Women's Health Initiative Insomnia Rating Scale

- Medical Outcomes Study 12-Item Short Form Survey SF-12

- Center for Epidemiologic Studies Depression Scale (CESD-10)

- 10-Item State-Trait Anxiety Inventory

The following validated survey instruments were implemented for Sueño:

- Epworth Sleepiness Scale

- Insomnia Severity Index

- Women's Health Initiative Insomnia Rating Scale

- Hispanic Stress Inventory (HIS)

- Neighborhood Social Cohesion Scale (NSC)

HRV DATA: <https://www.kaggle.com/datasets/qiriro/swell-heart-rate-variability-hrv>

Variables -

no stress: the subjects are allowed to work on the tasks as long as they needed for a maximum

of 45 minutes but they are not aware of the maximum duration of their tasks.

time pressure: during this time, the time to finish the task was reduced to 2/3 of the time the participant took in the neutral condition.

interruption: the participants received eight

emails in the middle of their assigned tasks.

Some emails were relevant to their tasks —and

the participant was requested to take specific

actions—while others were just irrelevant to

their tasks.

HRV COMPUTATION

HRV indices were computed as follows: First, we extracted an inter-beat interval

(IBI) signal from the peaks of the Electrocardiography (ECG) of each subject. Then, each HRV

index is computed on a 5 minutes IBI array. A new IBI sample is appended to the IBI array while the

oldest IBI sample is removed from its beginning. The new resulting IBI array is used to compute

the next HRV index. This process is repeated until the end of the entire IBI signal. Unlike other

HRV computation methods proposed by other researchers —which mostly consist of computing

HRV on the whole signal— in our previous studies, we noticed that this approach allows a more

granular, detailed and accurate study of how each heartbeat influences the person’s HRV.