

Dataset: garmin\_SleepData.json

Format: JSON file

Sleep Monitoring Device: Garmin Venu 2 Sq

Dates Monitored: 02/29/2024-03/08/2024, 03/19/2024-03/21/2024,  
03/23/2024, 03/25/2024.

Description: For each night of sleep, variables measuring sleep time, sleep respiration rate and various other factors were collected using an accelerometer and heart rate sensor.

Variables:

"sleepStartTimestampGMT": Timestamp indicating the start of sleep (GMT).

"sleepEndTimestampGMT": Timestamp indicating the end of sleep (GMT).

"calendarDate": Calendar date when sleep variables were measured (GMT).

"sleepWindowConfirmationType": ENHANCED\_CONFIRMED\_FINAL and ENHANCED\_CONFIRMED both mean that sleep data was collected from a device capable of running an enhanced sleep analysis to detect REM sleep, and no further updates or refinements to this sleep analysis are expected.

"deepSleepSeconds": Duration of deep sleep in seconds.

"lightSleepSeconds": Duration of light sleep in seconds.

"remSleepSeconds": Duration of REM sleep in seconds.

"awakeSleepSeconds": Duration of time spent awake during interrupted sleep period in seconds.

"unmeasurableSeconds": Duration of unmeasurable sleep in seconds.

"averageRespiration": Average respiration rate during sleep.

"lowestRespiration": Lowest recorded respiration rate during sleep.

"highestRespiration": Highest recorded respiration rate during sleep.

"retro": unspecified

Dataset: oura\_SleepData.json

Format: JSON file

Sleep Monitoring Device: Oura Ring

Dates Monitored: 02/29/2024-03/08/2024, 03/19/2024-03/21/2024, 03/23/2024, 03/25/2024.

Description: For each night of sleep, variables measuring sleep time, sleep respiration rate and various other factors were collected using an accelerometer and infrared photoplethysmography sensors. Oura data monitors more sleep variables than Garmin, so most of the sleep data will not be used in this analysis.

Variables (unused variables will be labeled N/A):

"average\_breath": Average respiration rate during sleep.

"average\_breath\_variation": Variation of respiration rate during sleep.

"average\_heart\_rate": Average heart rate during sleep.

"average\_hrv": Variation of heart rate during sleep.

"awake\_time": Duration of time spent awake during interrupted sleep period in seconds.

"bedtime\_end": Timestamp indicating the end of sleep (and time difference from UTC).

"bedtime\_start": Timestamp indicating the start of sleep (and time difference from UTC).

"contributors": {

    "deep\_sleep": Score calculated by Oura based on quality and duration of deep sleep.

    "efficiency": Score calculated by Oura to determine quality of sleep efficiency.

    "latency": Score calculated by Oura to determine quality of sleep onset latency.

    "rem\_sleep": Score calculated by Oura to determine quality of REM sleep.

    "restfulness": Score calculated by Oura to determine quality of restfulness.

"timing": Score calculated by Oura to determine quality of sleep timing and whether it is aligned with circadian rhythm.

"total\_sleep": Score calculated by Oura to determine total sleep quality based on amount of sleep.

},

"day": Calendar date when sleep variables were measured (GMT) .

"deep\_sleep\_duration": Duration of deep sleep in seconds.

"efficiency": total\_sleep\_duration/time\_in\_bed

"got\_ups": Amount of times during the night that you got up from bed.

"heart\_rate": {

"interval": Number of seconds between each time heart rate was measured.

"items": measured heart rate for every interval throughout time asleep

"timestamp": Timestamp indicating the start of heart rate monitoring and (and time difference from UTC) .

}

"hrv": {

"interval": N/A

"items": N/A

"timestamp": N/A

}

"latency": Time in seconds from the time in bed until the time fell asleep.

"light\_sleep\_duration": Duration of light sleep in seconds.

"lowest\_heart\_rate": Lowest heart rate during sleep.

"lowest\_heart\_rate\_time\_offset": N/A.

"movement\_30\_sec": N/A.

"period": N/A.

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"readiness": {
  "contributors": {
    "activity_balance": N/A.
    "body_temperature": N/A.
    "hrv_balance": N/A.
    "previous_day_activity": N/A.
    "previous_night": N/A.
    "recovery_index": N/A.
    "resting_heart_rate": N/A.
    "sleep_balance": N/A.
    "sleep_regularity": N/A.
  },
  "score": Readiness score generated by Oura the morning
after sleep.
  "temperature_deviation": N/A.
},
"readiness_score_delta": N/A.
"rem_sleep_duration": Duration of REM sleep in seconds.
"restless_periods": N/A.
"score": N/A.
"segment_state": N/A.
"sleep_algorithm_version": N/A.
"sleep_midpoint": N/A.
"sleep_score_delta": N/A.
"time_in_bed": Duration of time in bed in seconds.
"total_sleep_duration": Total sleep duration in seconds.
"type": Type of sleep. (Sleeps that take place each night
are characterized as "long sleep" by Oura).
"wake_ups": Amount of times woken up throughout the night.
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"sleep_phase_5_min": N/A.  
"restless": N/A.  
"timezone": N/A.  
"bedtime_start_delta": N/A.  
"bedtime_end_delta": N/A.  
"midpoint_at_delta": N/A.  
}
```