

Automated Sleep and Activity Insights Generation

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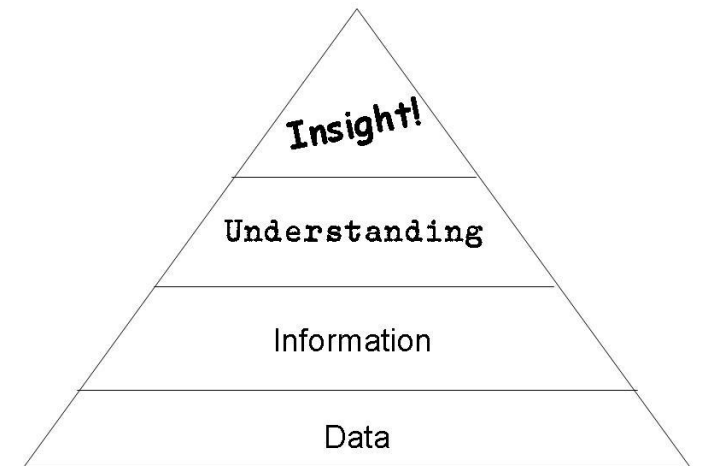
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Introduction

- What are Insights?
 - “An accurate and deep understanding”
- Insights need to be ‘mined’ from data as they are of low volume and have no fixed occurrence.
 - Apples are bigger than grapes.
 - On Mondays, you sleep less than on other days.
 - On Fridays you burn more calories than other days.



How we generate the Insights

Activity (A)	Calories Burnt (C)	Duration (minute)
Running	300	55
Running	310	59
Walking	150	58
Walking	140	60
Rowing	280	58
Rowing	290	66



Decide the
schematic template

{{Activity:1}}{{measurement}}{{Actiity:2}}



Step 1: Statement Generation

While running you burnt
<blank> calories than while walking.

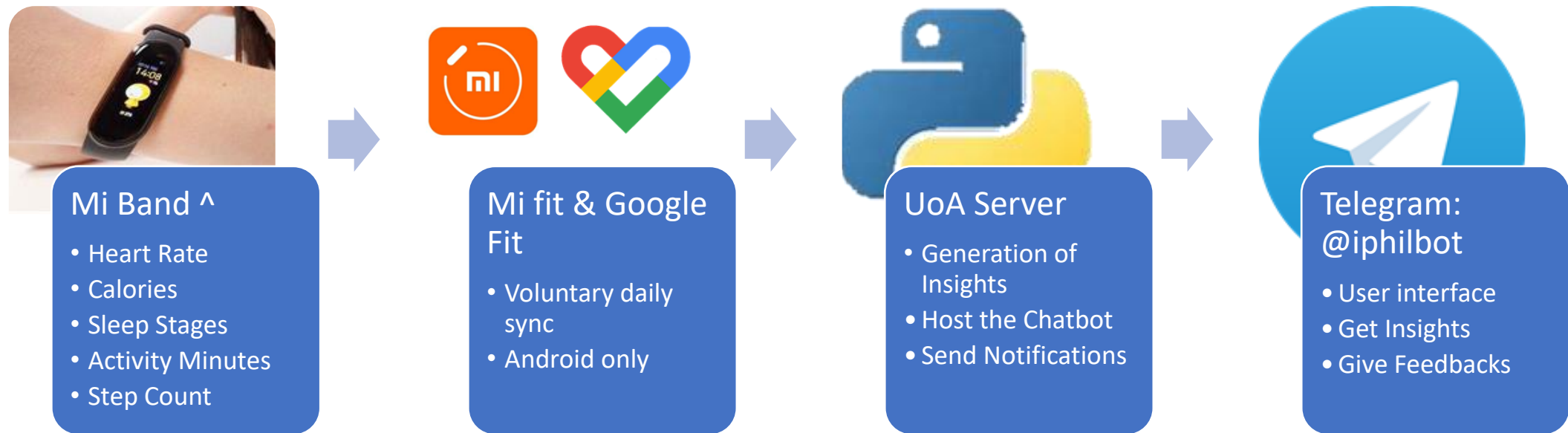
Step 2: Statement Scoring

While running you burnt **more** calories
than while walking (**score = 0.96**)

While running you burnt **more** calories
than while rowing (**score = 0.05**)

Automatically generate **significant** insights that help to optimize campaigns

Sleep and Activity IG - Overview



Hypothesis: AI based Recommendation system can help to deliver useful insights to the user

App Setup:



Google Fit

- [Google Fit: Activity Tracking – Apps on Google Play](#)
- Add google account in settings -> google -> Add another account
- Google Fit: credentials provided
- Open Google fit and choose the new user credential
- Set height/weight etc as per your wish. DOB need not be very accurate.

App Setup :

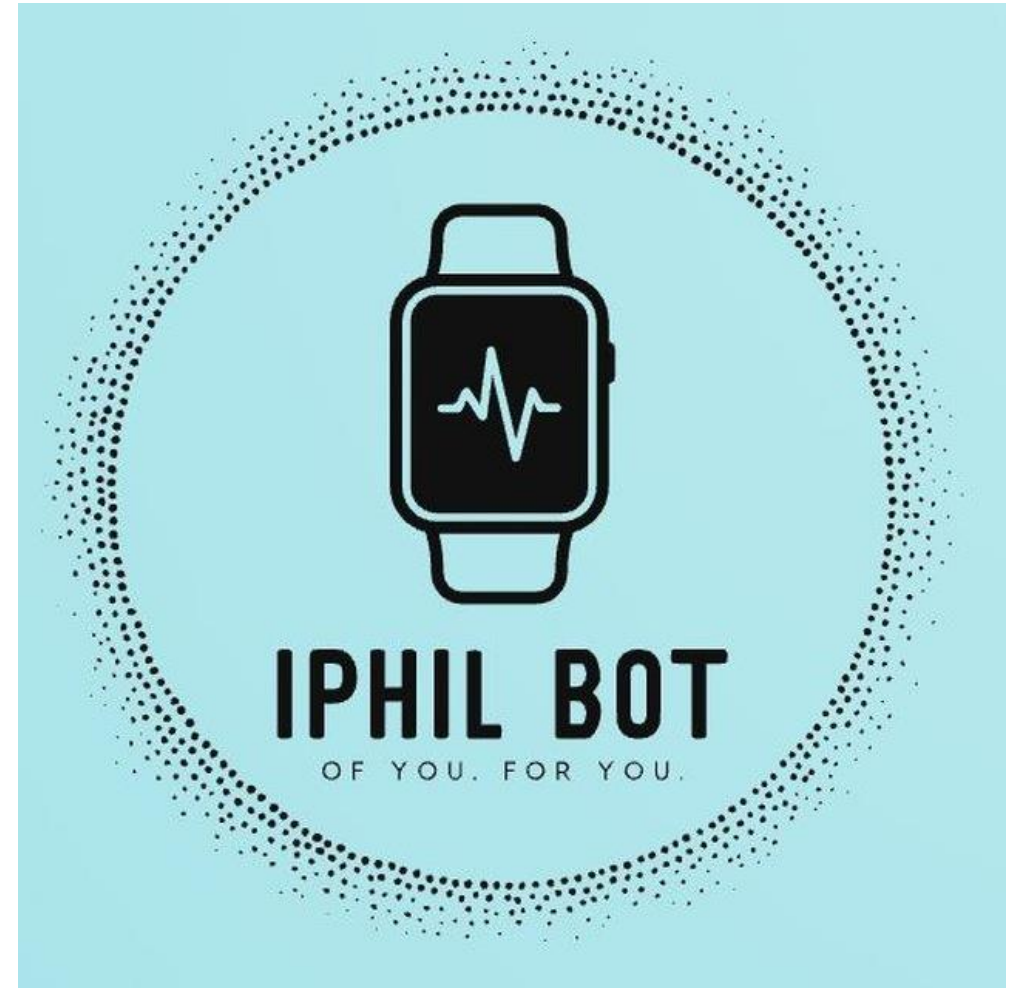


Mi Fit/
Zepp Life

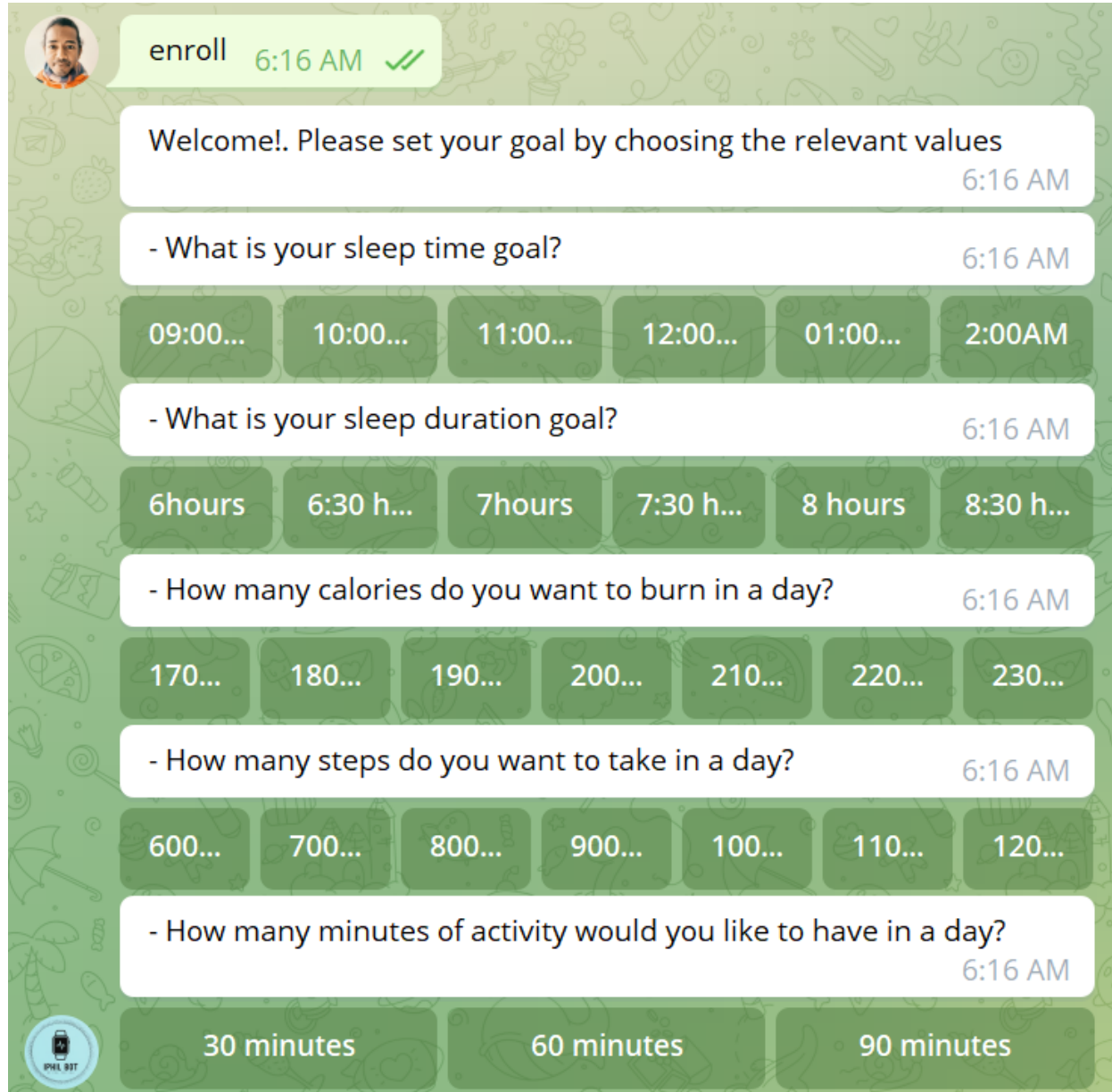
- [mi fit – Android Apps on Google Play](#)
- Credentials shared personally: create a new account using the provided google id
- Pair the device using “+ add device”, tap on the tick mark on the device
 - While-in use access
- Personal Info need not be accurate, but to some
- Important Settings:
 - Profile -> add accounts -> google fit -> login shared earlier
 - Profile -> My devices -> Mi Band ->Heart rate monitoring -> detection frequency : 1min
 - Profile -> My devices -> Mi Band ->Heart rate monitoring -> activity monitoring: on
 - Optional : background

Telegram

- [telegram – Android Apps on Google Play](#)
- Any account username to be shared
- Remember to not include contacts if you don't want to be broadcasted
- @iphilbot opens the chat bot
- Say hi to get started



Enrollment



A screenshot of a WhatsApp chat interface for an enrollment process. The chat background is green with a pattern of small white icons. At the top left is a circular profile picture of a man with a beard and orange shirt. The first message is a green bubble with the text "enroll" and a timestamp of "6:16 AM" followed by a green double-checkmark. Below this are four white bubbles, each containing a question and a timestamp of "6:16 AM". Each question is followed by a row of green buttons with white text. The first question is "Welcome!. Please set your goal by choosing the relevant values". The second question is "- What is your sleep time goal?" followed by buttons: "09:00...", "10:00...", "11:00...", "12:00...", "01:00...", and "2:00AM". The third question is "- What is your sleep duration goal?" followed by buttons: "6hours", "6:30 h...", "7hours", "7:30 h...", "8 hours", and "8:30 h...". The fourth question is "- How many calories do you want to burn in a day?" followed by buttons: "170...", "180...", "190...", "200...", "210...", "220...", and "230...". The fifth question is "- How many steps do you want to take in a day?" followed by buttons: "600...", "700...", "800...", "900...", "100...", "110...", and "120...". The sixth question is "- How many minutes of activity would you like to have in a day?" followed by buttons: "30 minutes", "60 minutes", and "90 minutes". At the bottom left is a blue circular icon with a white smartphone and the text "IPHEX 99T".

enroll 6:16 AM ✓✓

Welcome!. Please set your goal by choosing the relevant values 6:16 AM

- What is your sleep time goal? 6:16 AM

09:00... 10:00... 11:00... 12:00... 01:00... 2:00AM

- What is your sleep duration goal? 6:16 AM

6hours 6:30 h... 7hours 7:30 h... 8 hours 8:30 h...

- How many calories do you want to burn in a day? 6:16 AM

170... 180... 190... 200... 210... 220... 230...

- How many steps do you want to take in a day? 6:16 AM


600... 700... 800... 900... 100... 110... 120...

- How many minutes of activity would you like to have in a day? 6:16 AM

30 minutes 60 minutes 90 minutes

IPHEX 99T

Help




help 6:10 AM ✓✓

This bot helps you understand your sleep and fitness behavior.
Please try the following prompts: 6:10 AM

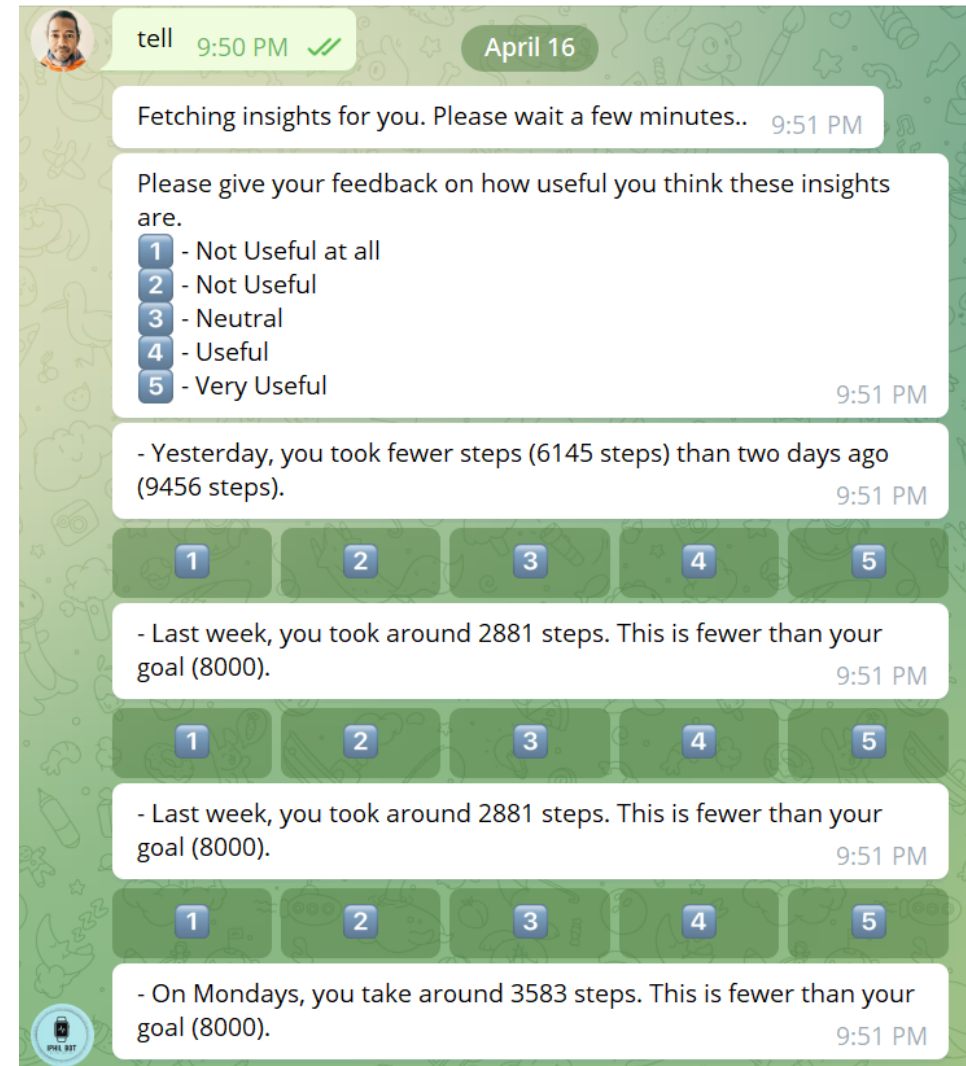
- Enroll
- 'Show insights from (yesterday or this week or yesterday etc) w.r.t my (activity or heart rate or calories or deep sleep or rem sleep or sleep duration)'
- 'Show insights about my (activity or heart rate or calories or deep sleep or rem sleep or sleep duration)'
- Otherwise, you can directly say 'sleep'/'activity'/'heart rate'/'calories'/[etc..](#)
- 'What do you see from my data?' or 'talk'/'tell'

sS - Feedback: The bot doesnt reply when I say 'show me insights'

- Documents: <https://github.com/allmin/sleepactivityinsights> 6:10 AM



On Demand Insights



The screenshot shows a chat interface with a green background and a pattern of small icons. At the top, there is a header bar with a profile picture of a man, the text "tell 9:50 PM" with a green checkmark, and a date bubble "April 16".

The chat history includes:

- A system message: "Fetching insights for you. Please wait a few minutes.." (9:51 PM)
- A text prompt: "Please give your feedback on how useful you think these insights are."
- A list of five feedback options, each in a blue box:
 - 1 - Not Useful at all
 - 2 - Not Useful
 - 3 - Neutral
 - 4 - Useful
 - 5 - Very Useful(9:51 PM)
- A text message: "- Yesterday, you took fewer steps (6145 steps) than two days ago (9456 steps)." (9:51 PM)
- A row of five blue boxes with numbers 1 through 5 for feedback.
- A text message: "- Last week, you took around 2881 steps. This is fewer than your goal (8000)." (9:51 PM)
- A row of five blue boxes with numbers 1 through 5 for feedback.
- A text message: "- Last week, you took around 2881 steps. This is fewer than your goal (8000)." (9:51 PM)
- A row of five blue boxes with numbers 1 through 5 for feedback.
- A text message: "- On Mondays, you take around 3583 steps. This is fewer than your goal (8000)." (9:51 PM)
- A row of five blue boxes with numbers 1 through 5 for feedback.

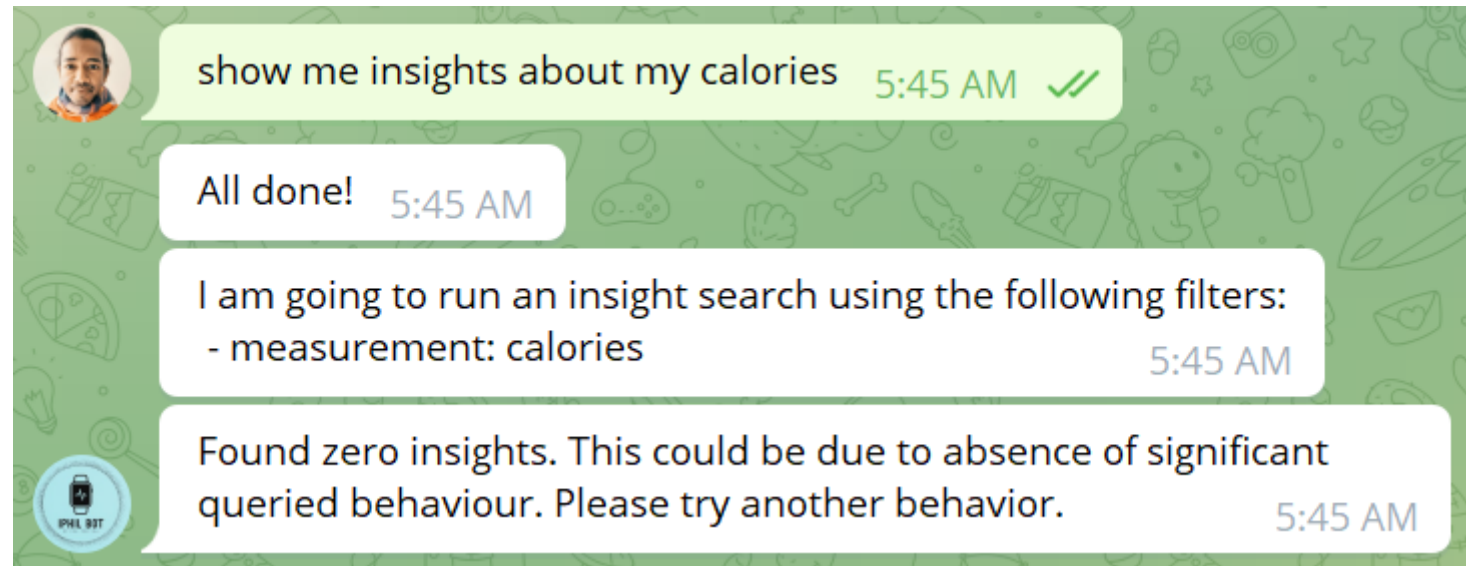
At the bottom left, there is a circular icon with a smartphone and the text "PHOTO BY".

What's a useful insight

Based on the following conditions:

- Actionable (It allows you to infer what situations led to the insight)
- Measurable/Informative (It tells you measurable information about your current behaviour)
- Can use it to improve your lifestyle with the insight?
- You can relate the insight to your lifestyle?
- Can you understand it?

No Insights to show



Right On Time Insights

Right-on-time insights:
Please give your feedback on how useful you think these insights are.

1 - Not Useful at all
2 - Not Useful
3 - Neutral
4 - Useful
5 - Very Useful

11:51 AM

During the mornings when you were active for more than 20 minutes/hour, you were active for more minutes (50 minutes).

11:51 AM

1 2 3 4 5

During the mornings when you were active for 5 to 20 minutes/hour, you burnt more calories per hour (96 calories) than other users (81 calories).

11:51 AM

1 2 3 4 5

During the mornings following a night when you slept more than 8 hours, you burnt more calories per hour (71 calories) than other users (69 calories).

11:51 AM

1 2 3 4 5

During the mornings when you were active for 5 to 20 minutes/hour, you were active for fewer minutes (16 minutes).

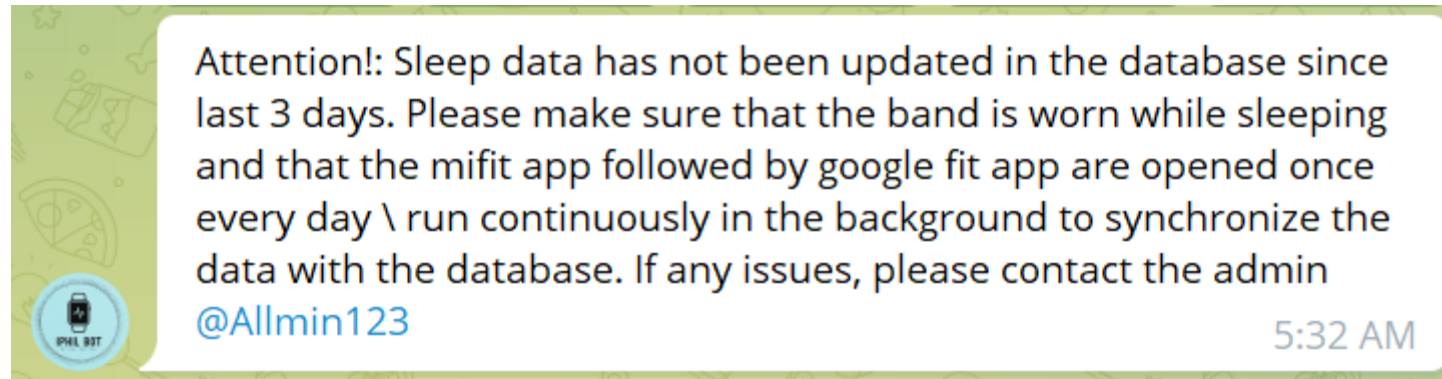
11:51 AM

1 2 3 4 5

Three times a day:

- 1) Morning
- 2) Afternoon
- 3) Evening

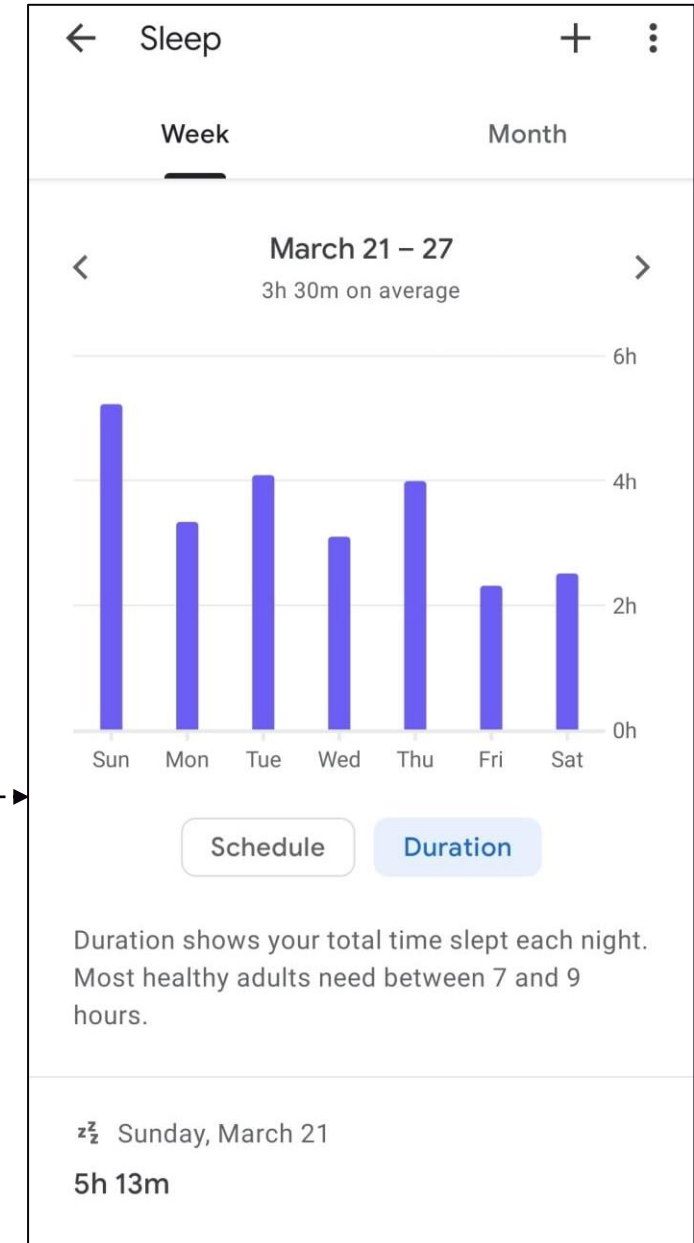
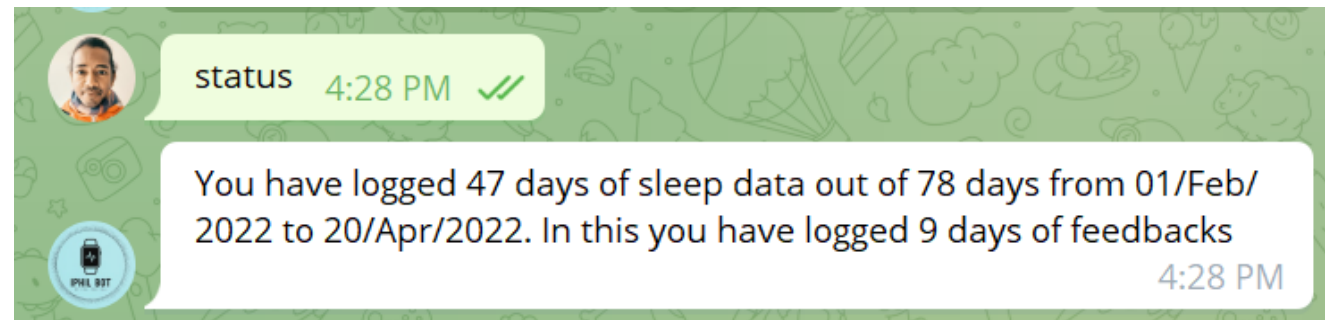
Notification: data sync



Mi Fit/
Zepp Life



Google Fit



Compliant participation instruction

- Try to wear the band as much as possible (except unavoidable reasons)
- Synch up the mobile app before sleep / 8PM every day
 - Or let the apps run in the background
- Respond to the Right-on-time insights as much as possible
- Try to give feedback at least once a day
- Any doubts. complains/bugs, please contact @Allmin123

Token of Appreciation

- 20 days of data in one month of time
 - > Wear the watch + give feedback + 15 Pounds Amazon Voucher
- Additional 20 days of data -> 15 Pounds Voucher
- You can withdraw at any time without questions. But your eligibility to keep the gift depends on when you withdraw.

Thank you