

Team 6B

SENTIMENT AI

Emotino



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The Team



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The Problem

Among office workers:

44% feel **burned out** from their work

30% often feel **stressed**

22% often feel **anxious**

**45%
vs
16%**

Workers who are burned out are nearly 3 times more likely to be actively searching for another job.



Based on a sample of 1405 U.S. workers surveyed from Jan. 30 to Feb. 1, 2024

Source: www.shrm.org

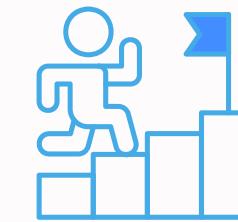
State of the Art

Speech Emotion Recognition (SER): Enhances HCI by interpreting emotions through vocal features.



Key Advancements:

- Datasets: *Emozionamente* (Big Six + Neutrality) bridges cultural and linguistic gaps.
- Features: MFCCs and prosodic elements (e.g., pitch, energy) critical for emotion detection.
- Techniques: Standard pipelines (preprocessing, feature extraction, classification).



Challenges:

- Speaker variability, noise, cross-cultural expressions.
- Need for real-time, multimodal approaches.

References

- [1] Schuller and W. Björn. "Speech emotion recognition. [Two Decades in a Nutshell, Benchmarks, and Ongoing Trends]". In: (2018).
- [2] Catania Fabio and Garzotto Franca. "Speech Emotion Recognition in Italian Using Wav2Vec 2.0 and the Novel Crowdsourced Emotional Speech Corpus Emozionalmente". In: (2020).
- [3] Taiba Majid Wani, Teddy Surya Gunawan, Syed Asif Ahmad Qadri, Mira Kartiwi, and Eliathamby Ambikairajah. "A Comprehensive Review of Speech Emotion Recognition Systems". In: (2021).

UNG



USERS

- Office workers
- HR manager



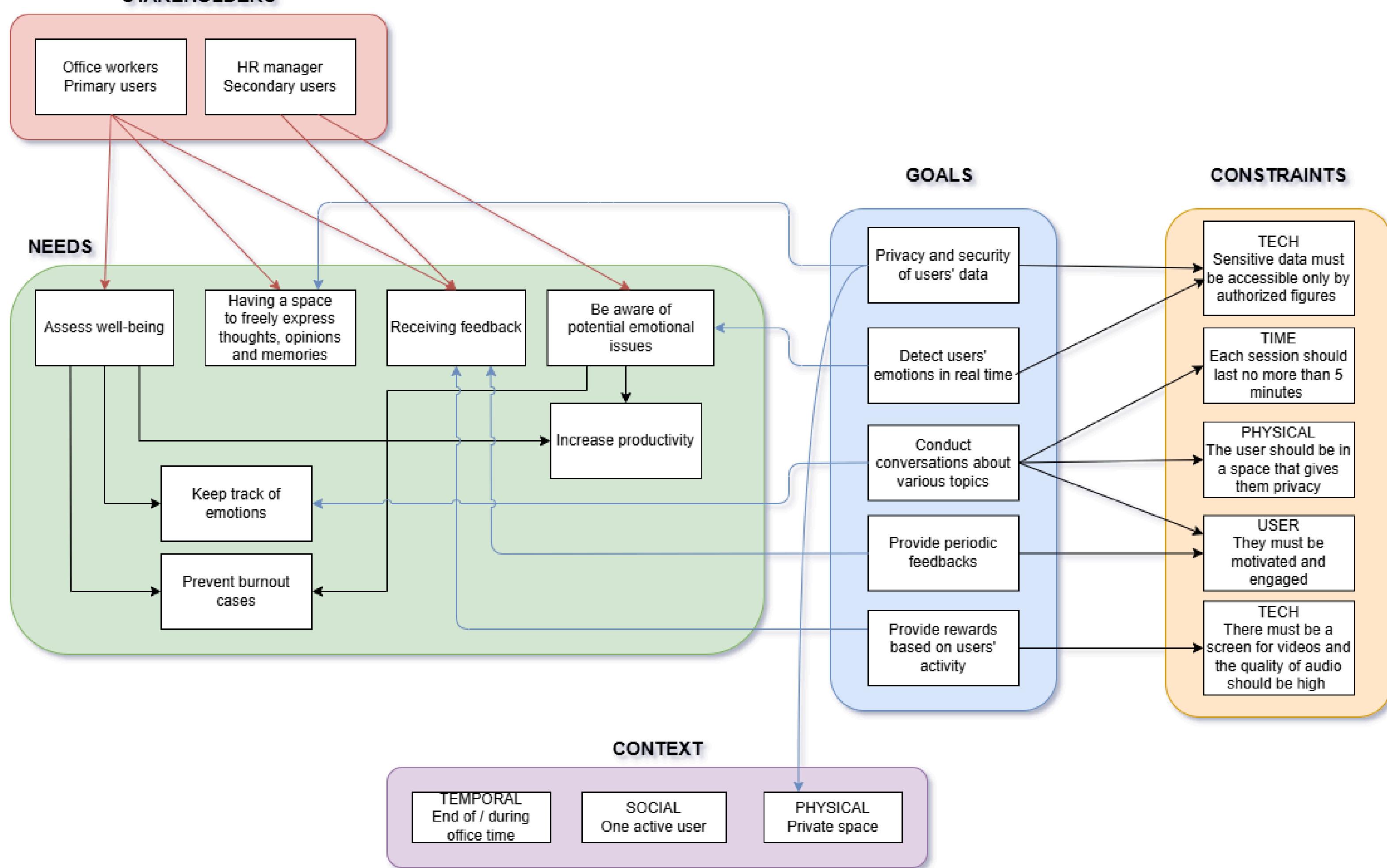
NEEDS

- Assessment of well-being
- Prevention of emotional issues



GOALS

- Tracking of emotional status
- Real-time feedback
- Engaging conversations and rewards



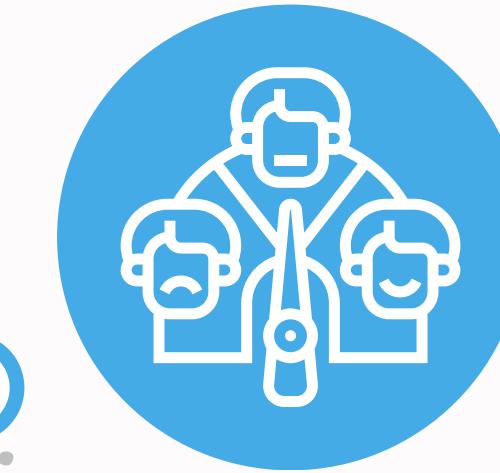
The Solution: EMOTINO

A private platform for the company to let workers express and analyze their emotions

Periodic session with an AI system



Incentives to emotional self-care



Instant feedback on the emotional status



Gamification of the whole experience

User Interface

EMOTINO

Where every emotion
matters, and your well-
being takes center stage



Email

English Italiano

Password

[Already registered? Log in!](#)

Name

Surname

Company

WORKER HR

Register

Registration and Login

Hello Francesco!

Welcome to Emotino! I hope you're having a great day!

 Profile

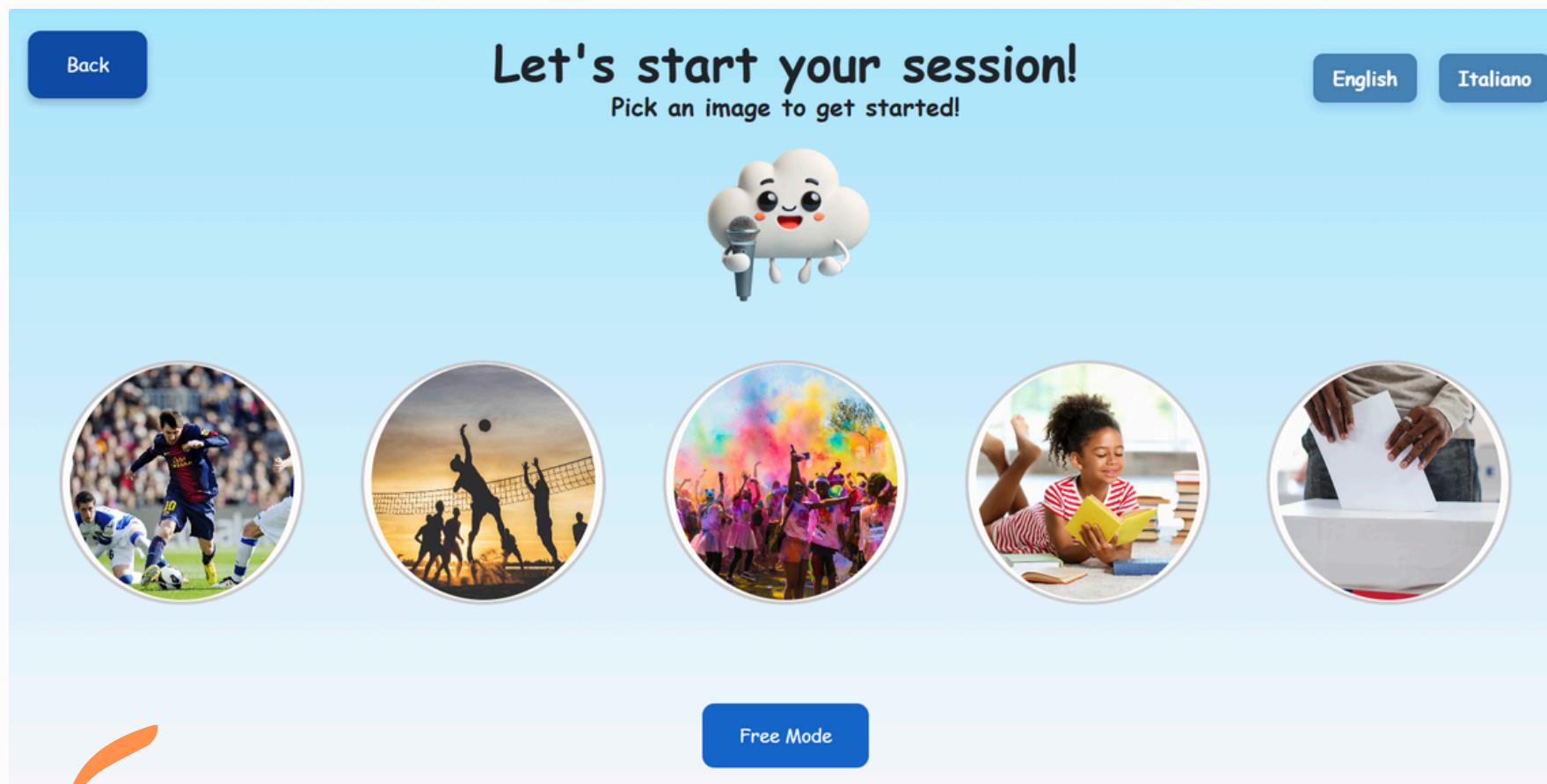
 History

Start Session

Homepage

Session with AI

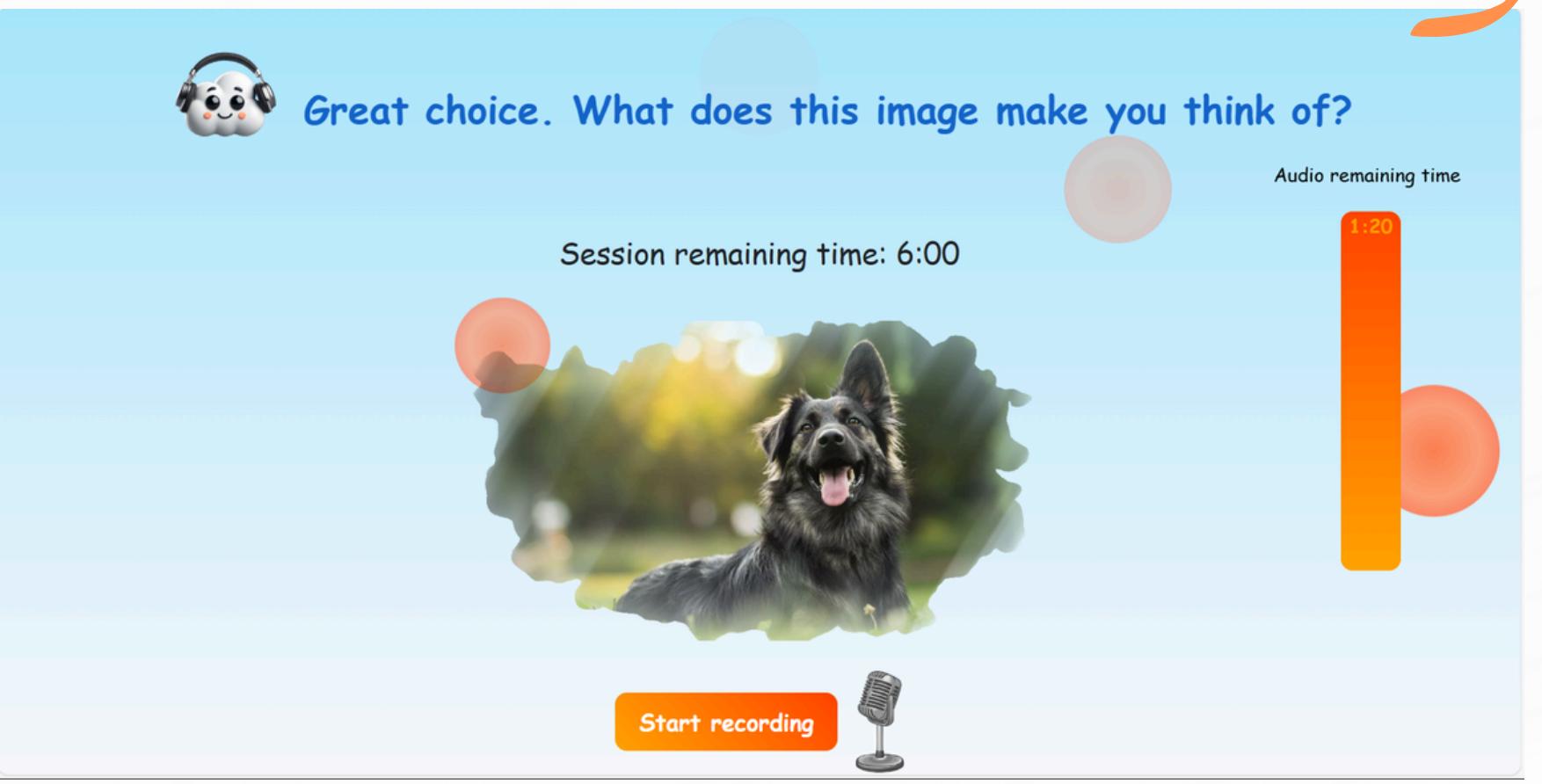
Interaction & Engagement



VISUAL PROMPT

Adaptability & Self-expression

CONVERSATION



Session with AI

Rewards & Motivation

REAL-TIME FEEDBACK ←

← **FINAL SUGGESTED ACTIVITIES**

→ **GAMIFICATION**

Your session is concluded!

Here are your results:

The emotion that you are mostly feeling is: **Sadness**

Suggested activity: **Sadness is a part of life, but also an opportunity to rediscover what truly matters.**

[Click here to collect your points](#)

You have obtained the following badges

Activity Starter	Emotional Awakener	Beginner Explorer

Activity Based Badge (Level 1) Level Based Badge (Level 1) Topic Based Badge (Level 1)

[Home](#)

Technologies



AI and External Communication

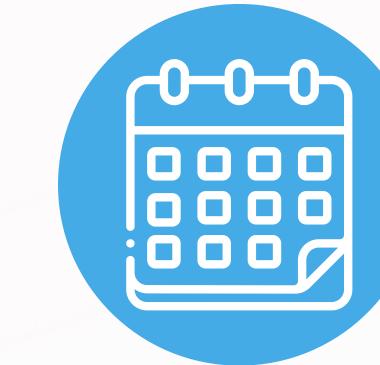
- **Speech Recognition:** Uses Web Speech API to process user audio, transcribe speech in order to enable emotion analysis.
- **Emotion Detection AI:** Analyzes audio input to identify emotions (The Big 6 + Neutrality) and outputs values between 0 and 1 for each emotion.
- **Generative AI:** Integrates GPT-4 (via Azure OpenAI) to create empathic and context-aware responses, enhancing user engagement.

Future Improvements



Isolated Room

- Ensure complete privacy
- Distraction-free environment



Appointments Management

- Book schedule
- Integration with company calendar



Final Activity

- Dynamically generated by AI
- Aligned with user's emotion



HR Dashboard

- Overview with charts and graphs
- Monitor trends and identify critical cases

```
10  
11 # now we can access the entire JSON object  
12 if "title" in theJSON["features"]:  
13     print(theJSON["metadata"]["id"])  
14  
15 # output the number of events, the count  
16 count = theJSON["metadata"]["count"]  
17 print(str(count) + " events returned")  
18  
19 # for each event, print the place name & count  
20 for i in theJSON["features"]:  
21     print(i["properties"]["place"] + "  
22         " + str(i["properties"]["count"] + "\n")  
23  
24 # print the events that only have a count  
25 for i in theJSON["features"]:  
26     if i["properties"]["count"] == 0:  
27         print(i["place"] + "\n")
```

Why us?

Impact on Employees:

- Safe Space
- Burnout Prevention
- Support & Motivation

Impact on HR Managers:

- Organizational Insights
- Proactive Interventions
- Increased Productivity



Adaptability



Self-expression tools



Engagement loops

Team 6B

THANK YOU



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