

SenseAI

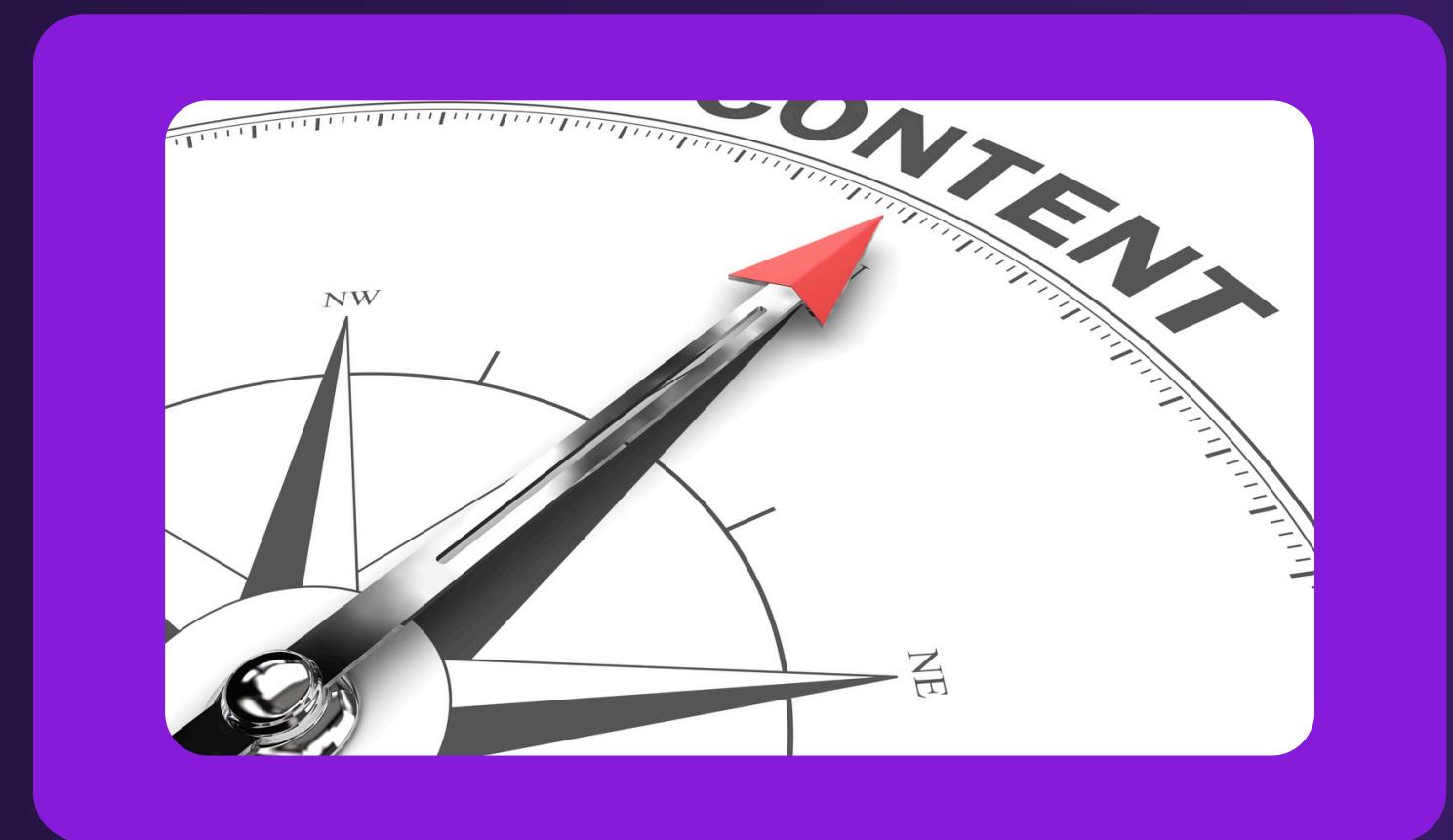
Your Digital Companion for Emotional Well-Being

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PROBLEM



Modern life stress

Single-modal solutions

Need for instant mental support

MARKET ANALYSIS



Woebot®

Text only

Basic emotional
tagging

Multimodal emotion
input is not supported



wysa

Text only

Limited emotional
tagging

Multimodal emotion
input is not supported



ELLIE

Voice and image inputs

For War Veteran

Not public

TARGET MARKET

Individuals seeking instant emotional support

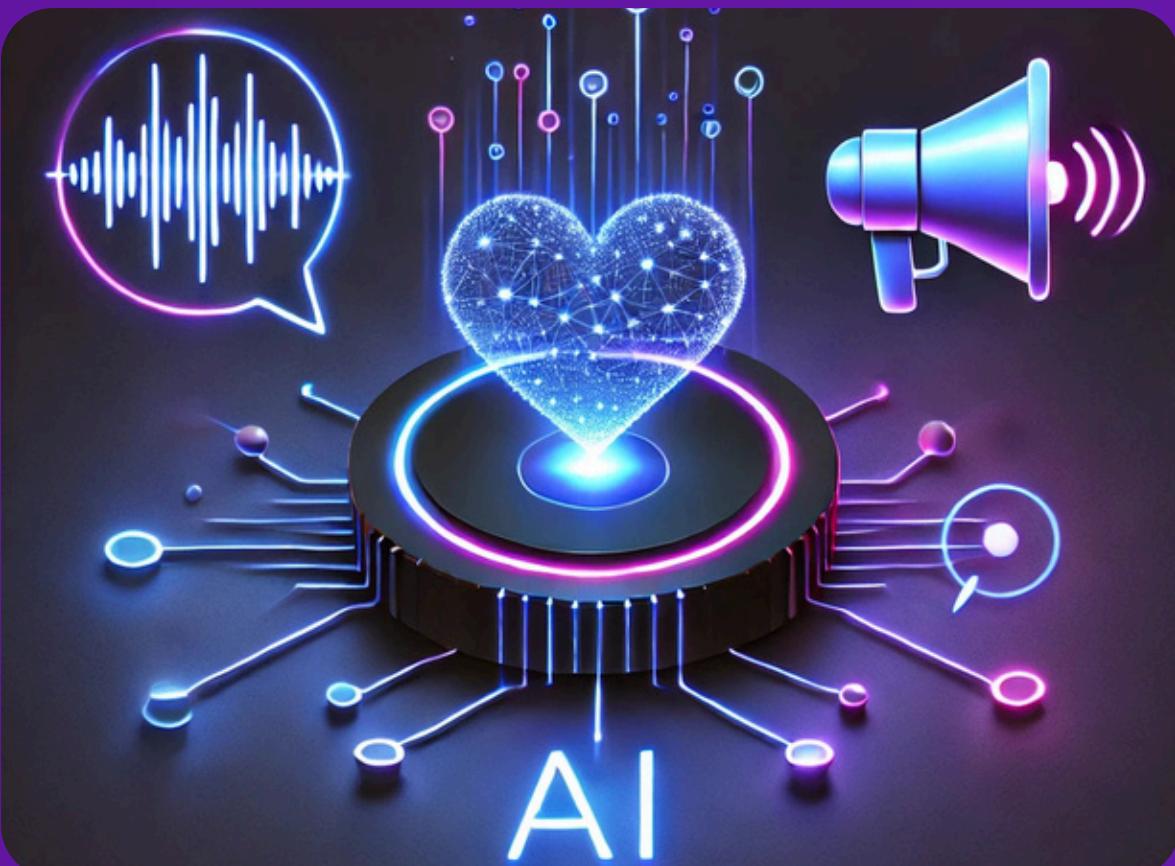
Mental health organizations

Psychologists

Institutions focusing on emotional well-being

OUR SOLUTION

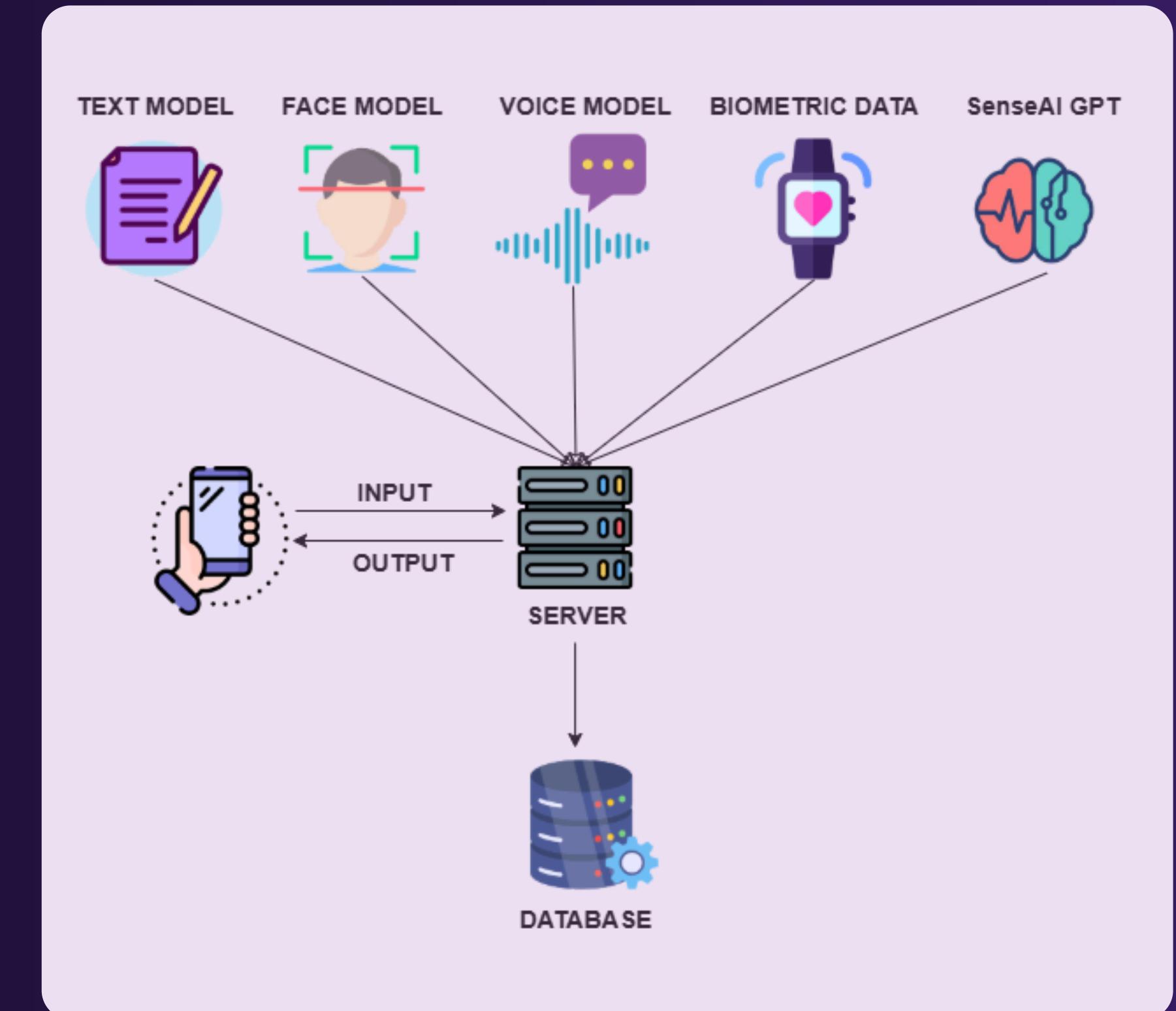
Multimodal
mobile chatbot
app



Real-time
feedback

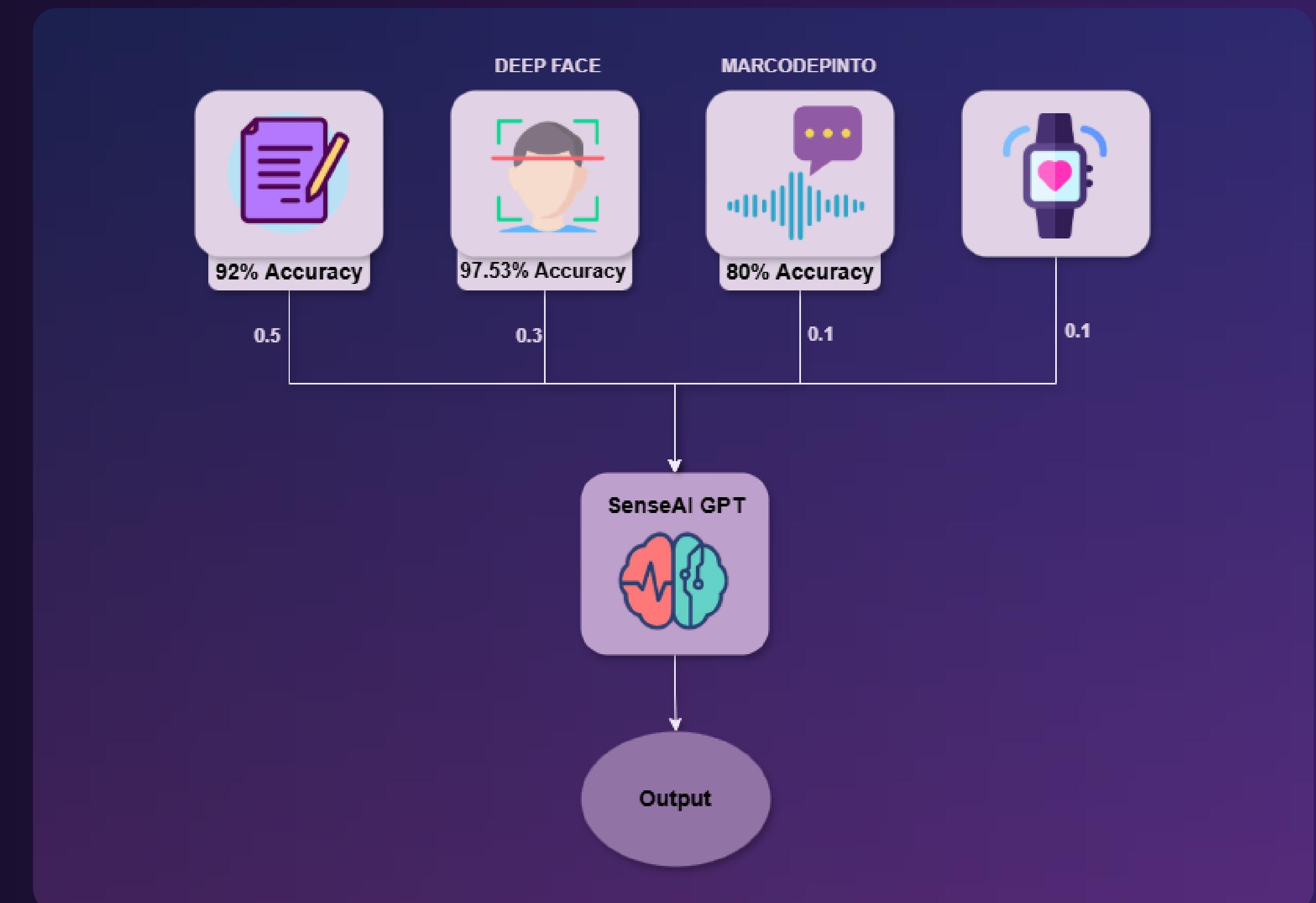
Personalized
empathetic
responses

ARCHITECTURE DIAGRAM



MODEL

Late Fusion AI Architecture



Psychological Data Preparation

Custom Dataset Creation

- Raw, unlabeled data from Kaggle
- Data augmentation with ChatGPT
- Labelling each output pair with text model
- Final dataset: ~2000 curated input-response pairs

Label Categories

Each example includes:

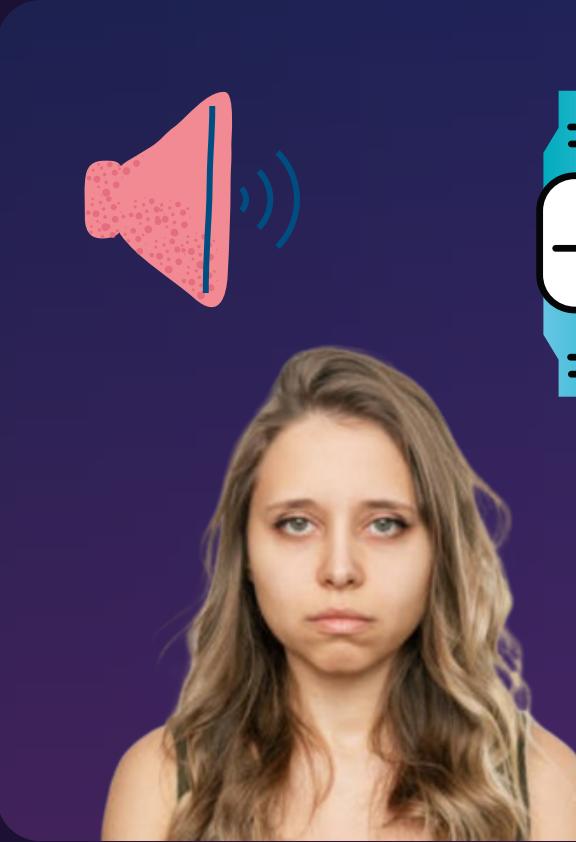
- One emotion label (from 7 core emotions)
- Real-life emotional user input
- Supportive, therapist-style response

Fine-Tuning Format for TinyLlama

- Input: Emotion: <emotion>. <user_sentence>
- Output: <supportive_response>

SenseAI GPT

Emotion-Driven Responses



A woman with long brown hair, looking directly at the camera with a neutral expression.

Speaker icon (red) and Heart rate monitor icon (blue).

- **Input:** " Emotion: sad.I lost a great amount of money today and this was huge for me. "
- **Response:** "Loss can feel overwhelming, and it's completely natural to grieve. Give yourself permission to feel that sadness, and know that healing comes in its own time. You don't have to carry this alone."

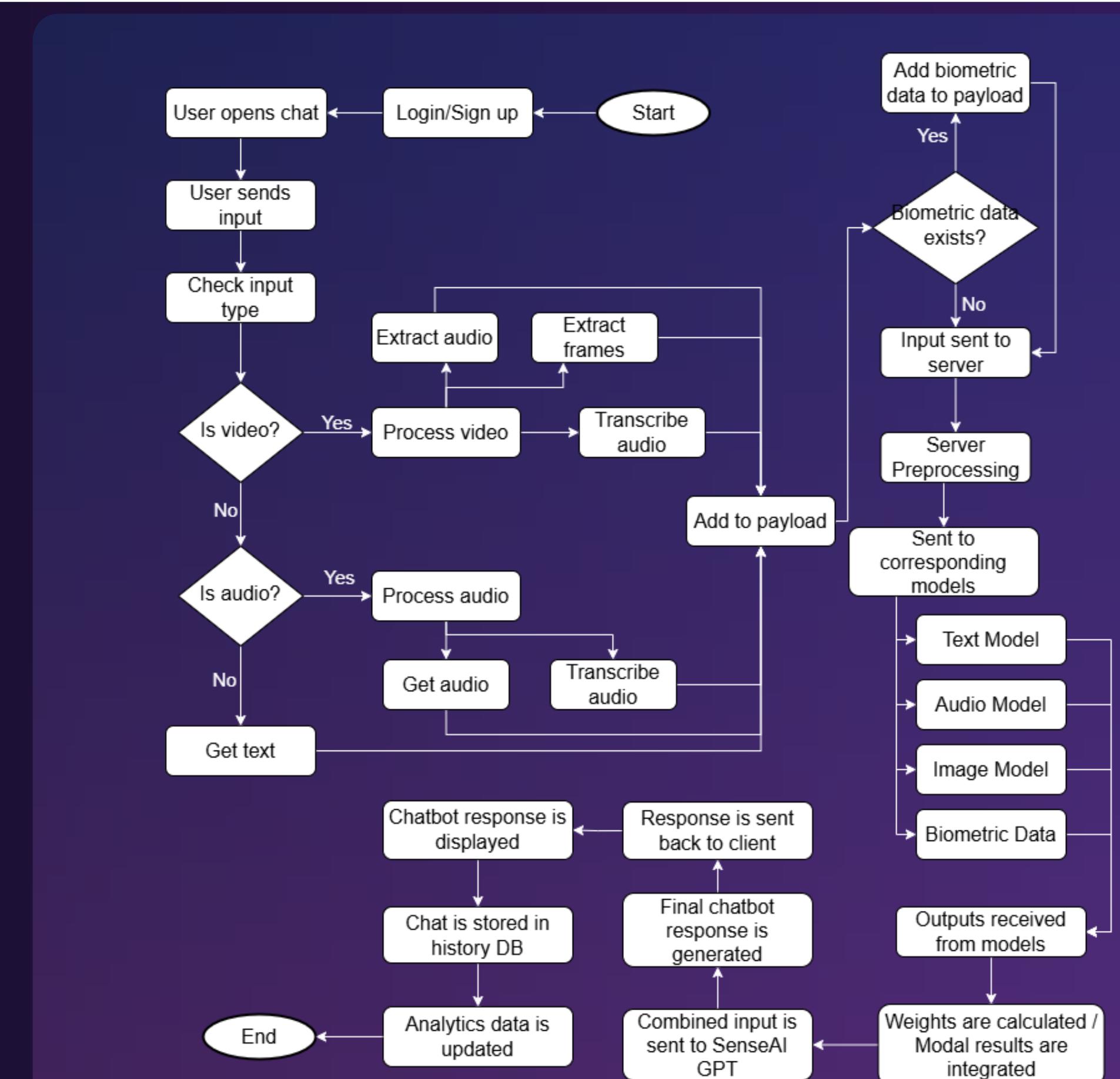


A woman with long brown hair, smiling broadly and showing her teeth.

Speaker icon (red) and Heart rate monitor icon (blue).

- **Input:** " Emotion: happy.I lost a great amount of money today and this was huge for me."
- **Response:** "Losing money is so tough; but it's always a sign that you're growing. What helped you recharge? What did you do to regain your energy?"

FLOWCHART



Challenges Faced



GPU memory insufficiencies for training the
LLaMA model

Finding suitable datasets

Finding the optimal format for text dataset

Biometric data integration

Technologies



❖ Flutter — Cross-platform mobile development

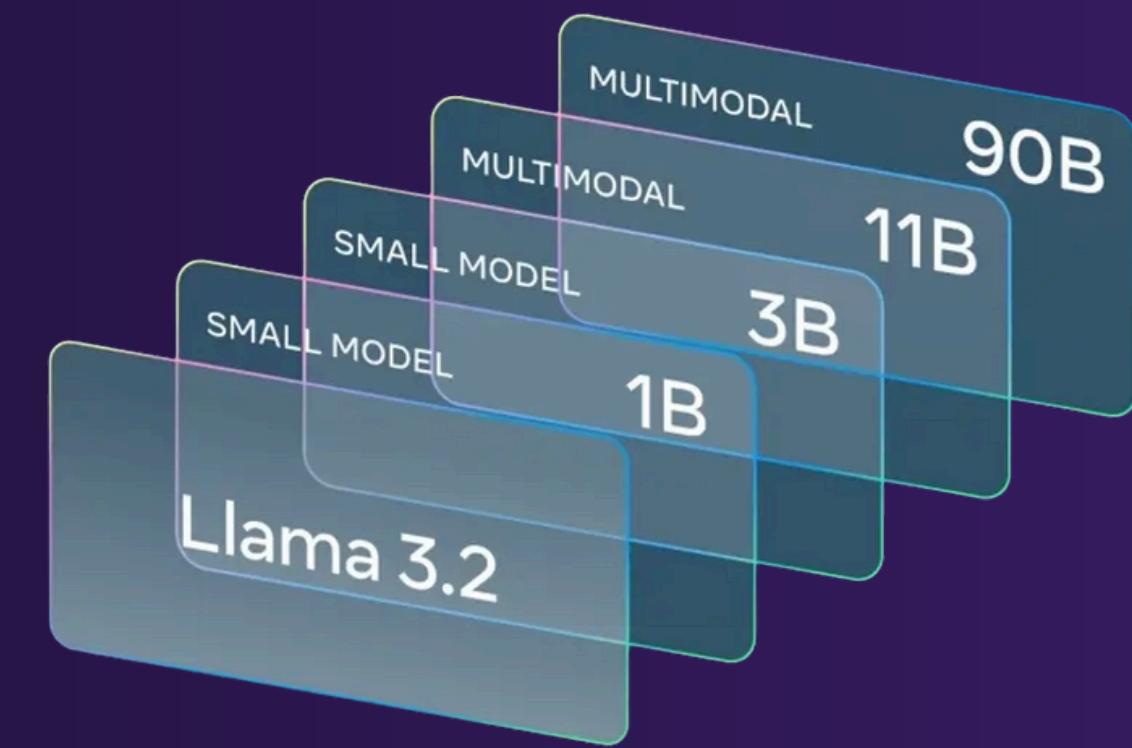
□ Node.js — Backend with RESTful APIs

🧠 Pytorch, Colab Pro, Keras, Huggingface — Training and usage of AI Models

💾 Firebase, Firestore, Gadgetbridge, Zepp Life integration — Databases & Services

Future Work

- Improve model accuracy and speed
- Larger model and dataset
- Improve report and chatbot UI
- Chat memory retention
- Early fusion



ACHIEVEMENTS



● TÜBİTAK 2209-A Grant

We have been awarded funding under the 2209-A University Student Research Support Program for our AI-driven psychology project.



● Teknofest 2025

We advanced to the Project Presentation Stage in the Technological Applications in Psychology category with a score of 84.00.

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DEMO

Q & A

Terminal Examples

```
● PS C:\senseai_backend\models\llama-model> python test.py
Please enter text and emotion
Enter your emotion:sad
Enter text:I lost a great amount of money today and this was huge for me.

● Modelin cevabı:
Loss can feel overwhelming, and it's completely natural to grieve. Give yourself permission to feel that sadness, and know that healing comes in its own time. You don't have to carry this alone.
```

```
● PS C:\senseai_backend\models\llama-model> python test.py
Please enter text and emotion
Enter your emotion:happy
Enter text:I lost a great amount of money today and this was huge for me.

● Modelin cevabı:
Losing money is so tough, but it's always a sign that you're growing. What helped you recharge? What did you do to regain your energy?
```

Dataset Examples

```
{"input": "Emotion: surprised.My partner planned a surprise trip for us", "output": "That's so thoughtful of them! I hope it brings you joy and adventure."}  
{"input": "Emotion: disgust.I overheard someone making a really inappropriate joke", "output": "That kind of comment can be really unsettling. It's okay to feel disturbed by it."}  
{"input": "Emotion: disgust.I saw my friend lie to someone just to manipulate them", "output": "That sounds very disappointing. It's hard to witness such behavior."}  
{"input": "Emotion: fear.I'm scared something bad might happen to my family", "output": "That worry shows how much you care. You're not alone in facing those fears."}  
{"input": "Emotion: fear.I don't feel safe walking home at night", "output": "Your fear is valid. Your safety matters, and it's okay to seek help or support."}  
{"input": "Emotion: sad.I can't stop crying at night", "output": "You're going through something really hard. I'm here to listen whenever you need."}  
{"input": "Emotion: happy.I'm finally feeling like myself again", "output": "That's wonderful to hear. You've come a long way—keep holding onto that feeling."}  
{"input": "Emotion: anger.I feel like everyone just expects me to be okay all the time", "output": "That pressure can be overwhelming. You're allowed to not be okay."}  
{"input": "Emotion: surprised.I found out I was accepted into the program I applied for!", "output": "That's amazing news! Sometimes the best things happen when we least expect them."}  
{"input": "Emotion: disgust.I saw a post online making fun of people with mental health issues", "output": "That's truly upsetting. You're right to feel disturbed by that."}  
{"input": "Emotion: fear.I'm afraid I might mess everything up again", "output": "It's okay to be scared. Mistakes don't define your worth or your future."}  
{"input": "Emotion: neutral.I've just been going through the motions lately", "output": "It's okay to have stretches like that. Let's gently explore what might help you."}  
{"input": "Emotion: sad.I feel invisible when I'm with my family", "output": "That feeling of being unseen can hurt deeply. You deserve to feel acknowledged."}  
{"input": "Emotion: sad.Nothing excites me anymore", "output": "That sounds like emotional exhaustion. You're not alone—let's explore this together."}  
{"input": "Emotion: sad.I don't even recognize myself lately", "output": "That's a painful place to be. Let's take small steps to reconnect with yourself."}  
{"input": "Emotion: sad.I wish someone would just ask if I'm okay", "output": "That longing makes sense. You deserve to be checked in on and cared for."}  
{"input": "Emotion: sad.I feel like giving up on everything", "output": "That sounds really hard. You're not alone, and I'm here to help you hold on."}  
{"input": "Emotion: neutral.I made some tea and read a few chapters of my book", "output": "That sounds like a peaceful moment. It's good to give yourself that space."}  
{"input": "Emotion: neutral.I don't have much to say today", "output": "That's perfectly okay. I'm here with you, even in the quiet moments."}  
{"input": "Emotion: neutral.Just doing my daily routine as usual", "output": "Sometimes sticking to routine brings stability. Thank you for sharing."}  
{"input": "Emotion: neutral.I went for a short walk this morning", "output": "That sounds like a grounding way to start your day. Nature can be healing."}  
{"input": "Emotion: neutral.I'm just tired but nothing's really wrong", "output": "It's okay to feel tired even without a specific reason. Rest is valid too."}  
{"input": "Emotion: happy.I finally slept well last night", "output": "That's great to hear! Quality rest can really change how we feel."}  
{"input": "Emotion: happy.I helped someone today and it felt really good", "output": "Acts of kindness can be deeply fulfilling. That's a beautiful moment."}  
{"input": "Emotion: happy.I spent the whole day doing things I love", "output": "That sounds so nourishing. You deserve to enjoy those moments fully."}
```

19:14 10 65%

SignUp

Sign Up

Username

Email

Password

Sign Up

Already have an account? [Login](#)

||| ⌂ <

10:11 11 65%

Login

Email

Password

Login

G Sign in with Google

Don't have an account? [Sign Up](#)

||| ⌂ <

