

MIND MEND

-Where the mind finds its calm.



What is ..

Mental Health



It helps us:

- **Feel happy**
- **Make good choices**
- **Get along with others**

Mental health is about how we think, feel, and act.

- **Mental health issues (stress, anxiety, depression) affect millions worldwide**
- **Limited access to timely, personalized support**
- **Many struggle to express emotions or track their mental state**
- **Existing apps lack interactivity, personalization, and actionable insights**

Why It Matters

When our mental health is good, we:

- **Feel calm and strong**
- **Do better in school**
- **Enjoy time with friends and family**



Solution-MINDMEND



- An **interactive web app for mental wellness**.
- Combines **AI emotion detection, mood tracking, and gamified coping tools**.
- Offers **motivational, tailored responses using NLP**.
- Designed to support users in managing their mental health proactively and positively.

It's okay to feel all emotions. Feelings are like weather—they come and go!

KEY FEATURES

Emotion Detection: Uses NLP (DistilBERT) to classify emotions

Chat Interface: Context-aware AI responses & exportable history.

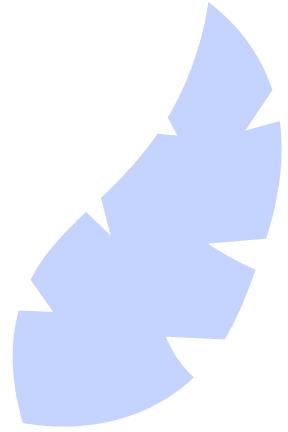
Mood Tracker: Daily logs with trends

Coping Tools: Deep breathing, grounding, gratitude journal.

Games & Achievements: Engaging activities with rewards and streak tracking.



TECH STACK



Frontend: Streamlit, Tailwind CSS

Visualization: Matplotlib, Seaborn

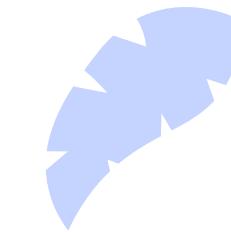
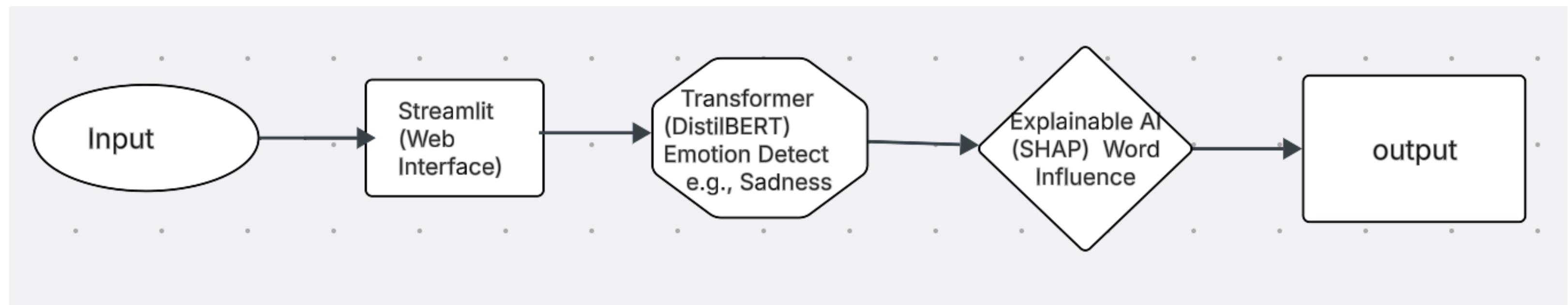
Database: PostgreSQL, Psycopg2

NLP & Explainability: Transformers (DistilBERT), SHAP, TextBlob

Backend: Python



IMPLEMENTATION



ACCURACY

```
{'loss': 0.0442, 'grad_norm': 0.9752516746520996, 'learning_rate': 7.745454545454545e-07, 'epoch': 4.87}
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h': 4.96}
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econd': 8.282, 'eval_steps_per_second': 0.26, 'epoch': 5.0}
{'train_runtime': 60029.1697, 'train_samples_per_second': 1.466, 'train_steps_per_second': 0.046, 'train_loss': 0.16795150248570875, 'ep
100%|██████████| 2750/2750 [16:40:29<00:00, 21.83s/it]
100%|██████████| 2750/2750 [16:40:29<00:00, 21.83s/it]
Loss vs Epoch graph saved as 'loss_vs_epoch.png'
Model and tokenizer saved to ./model
100%|██████████| 69/69 [04:18<00:00, 3.75s/it]
Final accuracy: 0.9477
```

ACCURACY-94.77%

CHALLENGES AND SOLUTIONS

- **Model Performance:** High memory usage → **Cached model loading**
- **Explainability:** SHAP was slow → **Limited token length + caching**
- **Database Load:** Frequent writes slowed app → **Indexed tables + optimized queries**
- **User Engagement:** Early feedback showed drop-off → **Added gamified streaks & rewards**



Future Work!

Mobile app for broader reach

Support multimodal input (voice, image)

Personalized responses based on user history

Cloud-hosted DB for scalability



Conclusion



MindMend AI fills a critical gap in accessible, personalized mental wellness support.

Combines AI, gamification, and simplicity to empower users.

With future scaling and personalization, MindMend can become a trusted wellness companion.



THANK YOU



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