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BrahmaX 1.0

The Creation of Tomorrow

BrahmaX 1.0

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Profile Overview

- ❖ **Theme** – Healthcare(H1)
- ❖ **Problem Statement Title** – AI-Based Detection of Mental Health Using Voice and Text
- ❖ **Team ID** –
- ❖ **Team Name** – Code Reapers

IDEA TITLE

MINDGUARD – EARLY DETECTION OF MENTAL HEALTH CONDITION THROUGH AI

➤ Solution Overview:

- **Lightweight AI solution** detecting early indications of *depression ,anxiety ,PTSD* etc. through **voice** and **text inputs**.
- Facilitates **early intervention** in mental health while maintaining user privacy.

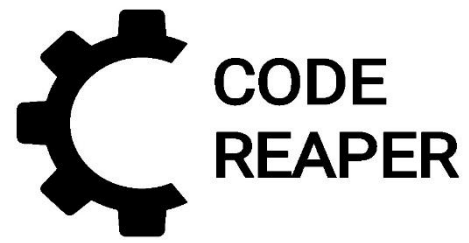
➤ Problem Solving:

- **Analyzes language** and **tone** to identify emotional distress.
- Provides mental health information and actionable recommendations.

➤ Innovation:

- Merges **NLP** and **voice analysis** into an easy, personal tool.
- Entirely accessible through the browser with only client-side technologies.

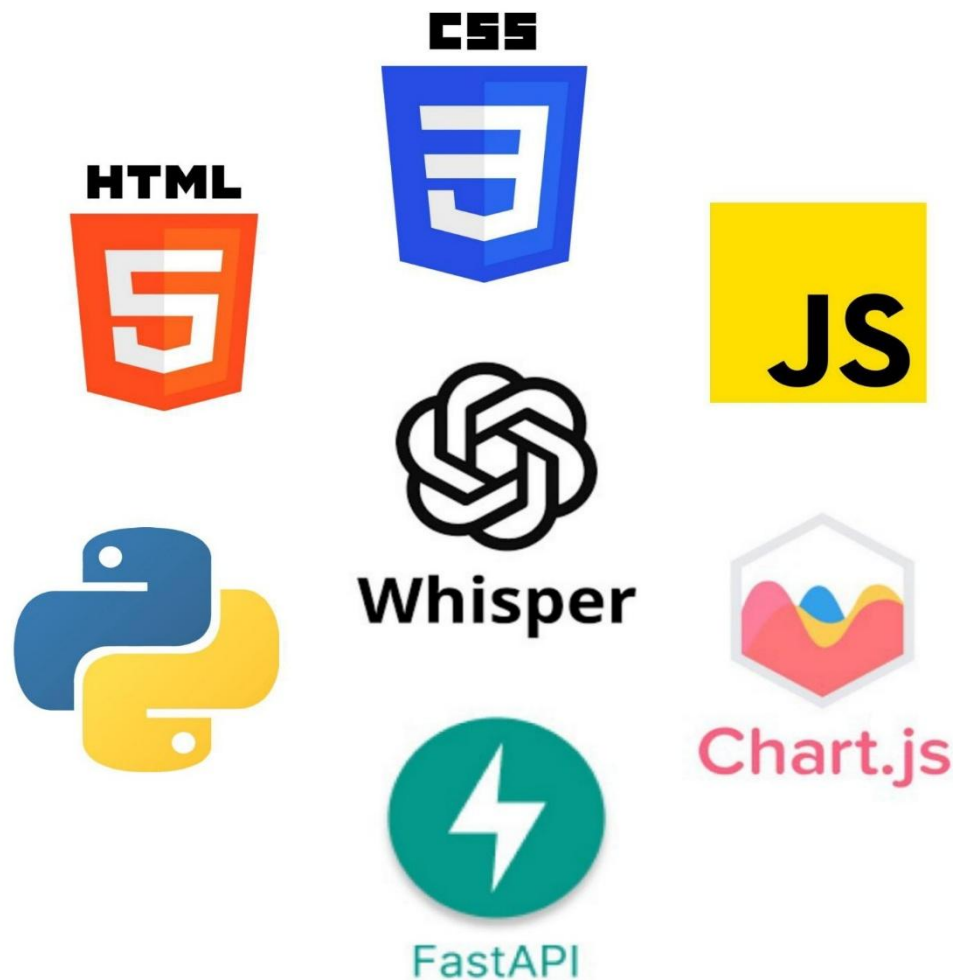




Technical Approach



❖ Technologies Used:



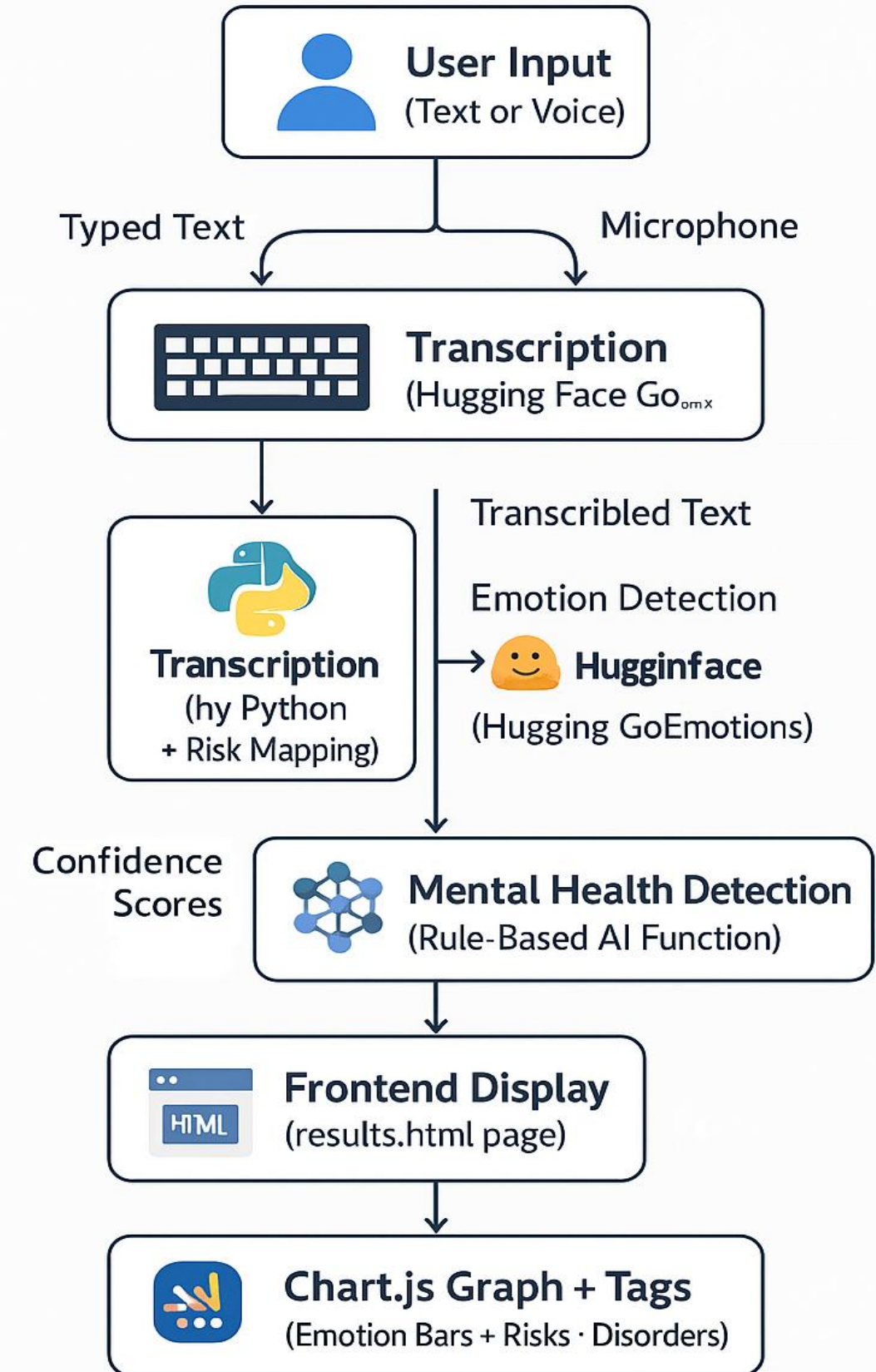
❖ Methodology:

- Capture user input (text or voice).
- Transcribe voice using Whisper.
- Assess emotional tone through **NLP models**.
- Provide insights and inform recommendations.

❖ Libraries/Models:

- **Whisper** (for voice-to-text transcription).
- **Hugging Face Transformers / TextBlob**(for emotion detection).
- **pyAudioAnalysis**(optional acoustic emotion analysis).

❖ Technical Flow:



➤ Feasibility:

- Constructed on common web tech - is supported on any browser.
- Backend powered by reliable **open - source AI Tools**.

➤ Challenges & Risks:

- Misclassification of emotions.
- Privacy issue when analyzing.

➤ Mitigation Strategies:

- Local handling of inputs (no dependency on cloud).
- Clear disclaimers and opt-in process.
- Periodic updates for model accuracy.



➤ Target Audience :

- Student , Remote workers , Everyday user.

➤ Key benefits :

- Early detection of emotional imbalance.
- Judgement – free user experience .
- Accessible and low –bandwidth friendly.

➤ Long Term value :

- Scalable across languages and geographies.
- Potential integration with mental health platform or institution.

TARGET AUDIENCE & BENEFITS



REFERENCES

- OpenAI Whisper: <https://github.com/openai/whisperHugging>
- Transformers: <https://huggingface.co/models>
- WHO Mental Health
- Emotion Detection Research(IEEE/PubMed)