N091,N093,N102,N107

Synopsis

\*Title: Mental Health Prediction using AI

### \*1. Introduction\*

Mental health issues such as depression, anxiety, and stress are growing concerns in today’s fast-paced society. Early detection and prediction of mental health risks can play a critical role in providing timely intervention and support. Traditional diagnosis relies on self-reports and clinical evaluations, which are often delayed or overlooked. To address this, Artificial Intelligence (AI) can be leveraged to analyze biometric, textual, and voice data to detect early signs of mental health deterioration.

### \*2. Objectives\*

\* To develop an AI-driven system that predicts the risk of mental health issues.

\* To collect multimodal data such as biometric inputs, voice, and textual information for analysis.

\* To provide real-time risk assessment and feedback to users.

\* To assist mental health professionals with data-driven insights for better treatment and follow-up.

### \*3. Methodology\*

1. \*User Interaction: Users log in, agree to consent/privacy policies, and provide data (biometric, text, or voice).

2. \*Data Preprocessing: The system cleans and validates the collected data.

3. \*AI Model Execution: AI algorithms analyze the input to determine emotional states and predict mental health risk levels.

4. \*Decision Process:

\* If \*high risk\* is detected → Trigger alerts, generate detailed reports, and suggest professional consultation.

\* If \*low risk\* is detected → Provide wellness advice, light activities, and downloadable reports.

5. \*Continuous Monitoring: The system checks user health periodically and updates recommendations.

### \*4. Expected Outcome\*

\* An AI-based system capable of predicting mental health risks.

\* Early intervention through timely alerts and professional consultation.

\* Improved well-being of users by providing continuous monitoring and personalized wellness suggestions.

\* A framework that can be extended to real-world applications in healthcare, workplaces, and educational institutions.

### \*5. Applications\*

\* Clinical mental health support.

\* Workplace employee wellness programs.

\* Educational institutions for student well-being monitoring.

\* Preventive healthcare solutions.

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