Mental Health Assessment Using LLM

1. Project Title
Mental Health Assessment Using LLM

2. Objective
The objective of this project is to create an interactive, AI-powered mental health assessment platform. The platform enables users to:
- Assess their mental well-being through a structured questionnaire.
- Receive an AI-generated professional analysis.
- Save assessments as PDF.
- Maintain records in CSV for further insights.
- Interact with a mental health-focused chatbot.

3. Technologies & Tools Used
- Programming Language: Python
- Framework: Streamlit
- AI/ML: Google Generative AI – Gemini 1.5 Pro
- PDF Generation: fpdf Python library
- Data Handling: pandas, CSV files
- Time and Date Handling: datetime, time
- Local Storage: CSV file creation and updating for data persistence
- Download Feature: PDF download via Streamlit’s file handling

4. Modules and Functionalities

A. User Personal Information Collection
- Input fields for: Name, Age, Gender, Phone Number, Email, Occupation
- Data validation to ensure all fields are filled before proceeding

B. Mental Health Assessment
- Questionnaire: 9 questions focused on psychological and emotional states (e.g., anxiety, sleep, mood, focus)
- Response Scale: ["Never", "Rarely", "Sometimes", "Often", "Always"] mapped to scores
- Scoring Mechanism:
  - <=15: Good Mental Health
  - 16–20: Mild Concerns

  - 21–50: Moderate Concerns
  - >50: Severe Concerns – Get Consultation
- AI-Powered Analysis:
  - Summary
  - Symptoms Identified
  - Condition Prediction
  - Detailed Breakdown (Anxiety, Sleep, Mood, Focus, etc.)
  - Recommendations & Precautionary Measures
  - Takes into account user's age, gender, and occupation for personalized results

C. Chatbot Interface

- Provides support for mental health-related queries
- Filters out unrelated prompts
- Ensures interaction stays focused on well-being
- Maintains context via session-based memory

D. Output Handling

- PDF Export:
  - AI’s response is saved in a PDF format
  - Available for direct download
- CSV Logging:
  - Timestamped entries
  - Stores personal info + individual question responses

5. Conclusion

This project demonstrates the integration of AI into a user-friendly mental health assessment tool. It not only provides immediate insights but also serves as a stepping stone for deeper psychological monitoring and analysis.