Project Initialization and Planning Phase

Date	16 June 2025
Team ID	SWTID1749709635
Project Title	Mental Health Prediction
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

The proposal report aims to transform mental health support in the workplace using machine learning, enhancing early detection and intervention. It addresses current challenges in identifying and supporting employees facing mental health issues, promising improved well-being, reduced stigma, and a more supportive work environment. Key features include a machine learning-based mental health risk prediction model, user-friendly web interface for self-assessment, and actionable insights for both employees and HR. Resource requirements include survey data, Python-based software tools, and a multidisciplinary team for development and deployment.

Project Overview	
Objective	The primary objective is to revolutionize workplace mental health support by implementing advanced machine learning techniques, enabling early detection and proactive intervention for mental health risks
Scope	The project comprehensively assesses and enhances mental health support systems, incorporating machine learning for more robust, efficient, and personalized employee well-being solutions.
Problem Statement	
Description	Addressing the lack of timely identification and support for employees facing mental health challenges, which negatively impacts well-being, productivity, and organizational culture.
Impact	Solving these issues will result in improved employee well-being, reduced stigma, increased productivity, and a more supportive workplace environment, contributing to overall organizational success.

Proposed Solution	
Approach	Employing machine learning techniques to analyze survey and workplace data, predicting mental health risks and enabling targeted support and interventions.
Key Features	• Implementation of a machine learning-based mental health risk prediction model • User-friendly web interface for self-assessment and resources • Real-time insights for employees and HR • Continuous learning to adapt to evolving workplace needs

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	CPU/GPU , 4 cores , T4 GPU
Memory	RAM specifications	8GB RAM
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy,matplotlib , seaborn
Development Environment	IDE, version control	Google Colab Notebook, Git, VSCode
Data		
Data	Source, size, format	Kaggle dataset (~1000+ records)