

Project Initialization and Planning Phase

Date	15 June 2025
Team ID	SWTID1749622322
Project Title	HealthCareApp – Mental Health Prediction Model Using ML
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

To help identify mental health risks early, we propose building a machine learning-based prediction model. The system will use user data like age, stress levels, and lifestyle habits. Classification algorithms such as Decision Tree, Random Forest, KNN, AdaBoost etc will be applied to analyze this data. The goal is to create a reliable tool that helps individuals and institutions take timely mental health actions.

Project Overview	
Objective	To build a machine learning model that can predict if a person is at risk of mental health issues, using data like lifestyle and behavior. The goal is to help identify problems early and support better mental well-being.
Scope	This project uses machine learning to predict if a person is at risk of mental health issues based on their personal and lifestyle data. It helps in early detection but does not give medical advice.
Problem Statement	
Description	This project aims to build a machine learning model that predicts the risk of mental health problems using user data like age, stress, work type, and habits. It helps in identifying people who may need support early, making mental health care more accessible and proactive.
Impact	This project can help identify mental health risks early, allowing people to seek help before problems get worse. It promotes awareness, reduces stigma, and supports better mental well-being in schools, colleges, and workplaces. .
Proposed Solution	
Approach	We used a mental health dataset, cleaned the data, and selected key features. Then, we trained models like Decision Tree, Random Forest, KNN, AdaBoost etc to predict mental health risks and compared their accuracy.

Key Features	Implementation of a machine learning-based mental health risk prediction model using classification algorithms.
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Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
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	Jupyter Notebook, pycharm
Data		

Data	Source, size, format	Kaggle dataset, 614, csv UCI dataset, 690, csv
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