Project Overview	
Objective	The objective of this project is to develop a machine learning-based system to accurately predict mental health issues, facilitating early intervention and providing actionable insights for individuals and healthcare providers while ensuring robust data privacy and security.
Scope	The scope includes data collection from diverse sources, preprocessing for quality, feature engineering with NLP and signal processing, model development for prediction, evaluation, integration into user-friendly interfaces, and stringent data privacy measures
Problem Statement	
Description	The problem statement involves predicting mental health disorders early using machine learning from diverse data sources, aiming to improve intervention and outcomes while safeguarding user privacy.
Impact	The impact of the problem statement lies in its potential to revolutionize mental health care by enabling early detection of disorders, leading to timely interventions that mitigate suffering, improve quality of life, and reduce healthcare costs through effective resource allocation
Proposed Solution	
Approach	The approach involves leveraging machine learning to analyze diverse data sources, developing predictive models for early detection of mental health issues, and ensuring robust privacy measures throughout.k
Key Features	**Multi-source Data Integration**: Integrating data from social media, wearable devices, and self-reported surveys. **Advanced Data Processing**: Cleaning, preprocessing, and feature engineering using NLP and signal processing techniques.

	Machine Learning Models: Implementing robust ML algorithms for predictive analysis.

Project Initialization and Planning Phase

Date	15 June 2024
Team ID	739903
Project Title	Mental health prediction
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The project aims to develop a machine learning-based system to predict mental health issues, enabling early intervention and providing actionable insights while ensuring robust data privacy and security measures.

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