**Project Initialization and Planning Phase**

|  |  |
| --- | --- |
| Date | NOV 30, 2024 |
| Team ID | 739838 |
| Project Title | Unlocking the Minds: Analyzing Mental Health with NLP |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) template**

Mental health is an essential element of well-being that profoundly affects individuals' emotional, psychological, and social functioning. Despite its importance, mental health often remains stigmatized and under-researched in many contexts, leading to inadequate support for individuals who are struggling. Mental health disorders such as depression, anxiety, and PTSD are becoming more prevalent, with significant implications for individuals, families, communities, and healthcare systems worldwide.

|  |  |
| --- | --- |
| **Project Overview** | |
| Objective | To analyze the prevalence and distribution of mental health disorders across different demographic groups (age, gender, ethnicity, socio-economic status, geographic region) and over time. |
| Scope | This project enables the learner to understand to evaluate the effectiveness of current mental health interventions. |
| **Problem Statement** | |
| Description | This project aims to fill these gaps by systematically analysing mental health data to uncover key trends, factors, and barriers, and proposing holistic, scalable solutions to improve mental health outcomes. |
| Impact | Implement a robust examining strategy to enhance mental health effectiveness, improve customer satisfaction, and drive personal growth. |
| **Proposed Solution** | |
| Approach | By utilizing advanced analytics tools to analyze and mental health data effectively. |
| Key Features | - Mapping prevalence and distribution of mental health disorders across demographics.  - Longitudinal tracking of mental health trends over time.  - Integrating data from psychology, sociology, public health, and medical research.  - Leveraging AI and machine learning for early prediction and diagnosis of mental health disorders.  - Establishing partnerships with governments, NGOs, and private organizations to ensure long-term success. |

**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 | NLTK,scikit-learn, pandas, NumPy, seaborn, matplotlib |
| Development Environment | IDE, version control | Jupyter Notebook, VS code |
| **Data** | | |
| Data | Source, size, format | Kaggle dataset, 614, csv |