**Project Initialization and Planning Phase**

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| 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.

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| **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**

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| **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) |