Project Initialization and Planning Phase

Date	15 March 2024
Team ID	738305
Project Name	Machine Learning Approach For Employee Performance Prediction
Maximum Marks	3 Marks

Define Problem Statements:

1. **Predicting Employee Performance:** Given historical data on various factors such as targeted productivity, SMV (Standard Minute Value), overtime, incentives, etc., develop a machine learning model to predict the actual productivity of employees in a manufacturing setting.
2. **Optimizing Workforce Efficiency:** Can we leverage machine learning to forecast employee productivity based on contextual variables such as date, quarter, department, and team? The aim is to identify patterns and trends that could help in optimizing workforce allocation and scheduling.
3. **Performance Prediction for Resource Planning:** How can we utilize machine learning to accurately predict employee performance using features such as idle time, number of style changes, and number of workers? This prediction could aid in resource planning and management to ensure optimal productivity levels.
4. **Early Detection of Performance Issues:** Develop a machine learning model that can detect deviations in employee productivity based on historical patterns and anomalies in factors like over time, idle men, and work-in-progress (WIP). This proactive approach aims to identify performance issues early for timely intervention and improvement.
5. **Tailoring Incentive Programs:** Utilize machine learning techniques to analyze the impact of incentive programs on employee productivity and develop a predictive model to suggest personalized incentive schemes based on individual and team performance, thereby maximizing overall productivity.