Project Initialization and Planning Phase

Date	15 March 2024
Team ID	738303
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., employee performance prediction is a process where an employer uses tools, techniques, and processes to determine if a candidate they are looking to hire will perform well in an actual work 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). Keeping an open line of communication with team members and fostering a culture where concerns are addressed promptly can also help in identifying performance issues before they escalate. Early detection allows for proactive problem-solving, ensuring smoother operations and higher productivity in the long run.
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.