Model Development Phase Template

Date	24 June 2025
Team ID	SWUID20250176209
Project Title	Machine Learning Approach for Employee Performance Prediction
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
month	Month of Observastion (Engineered from date)	Yes	Captures potential seasonal effects or monthly order fluctuations that may influence performance.
quarter	Quarter of the year	Yes	Useful for identifying seasonal trends in productivity
department	Department where the employee works	Yes	Affects workflow type and performance metrics
day	Day of the week	Yes	May influence productivity depending on workload patterns
team	Team number assigned to employee	Yes	Helps capture productivity at group level
targeted_productivity	Target productivity set for the day	Yes	Important to compare actual vs expected performance
smv	Standard Minute Value (effort metric)	Yes	Core feature affecting productivity
wip	Work-in-progress at the start of the day	No	We dropped this column due to missing values
over_time	Extra time worked	Yes	Impacts productivity directly
incentive	Bonus or incentive received	Yes	Motivates performance and affects output

idle_time	Time spent idle	Yes	High idle time can negatively affect productivity
idle_men	Number of workers idle	Yes	Indicates team inefficiency
no_of_style_change	Number of changes in product style	Yes	Frequent style changes may disrupt flow and impact productivity
no_of_workers	Total number of workers in the team	Yes	Affects workload distribution and productivity potential
actual_productivity	Measured output of the employee/team	Yes	Target variable for the prediction model