

Model Development Phase Template

Date	10 July 2024
Team ID	SWTID1720455879
Project Title	Human Resource Management: Predicting Employee Promotions Using Machine Learning
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
employee_id	Unique ID for employee	No	It does not provide any predictive value for promotion. It's a unique identifier and has no bearing on the target variable (is_promoted).
department	Department of employee	Yes	The department can impact promotion decisions as different departments may have different promotion criteria or opportunities
region	Region of employment	No	While the region may affect promotion chances due to regional policies, it's often excluded in initial models to reduce complexity and focus on more

			direct features.
education	Education Level	Yes	Education level can influence promotion decisions as higher educational qualifications may be a prerequisite for certain roles.
gender	Gender of Employee	No	Including gender might lead to ethical concerns and bias in the model. Promotion should ideally be gender-neutral.
recruitment_channel	Source of Recruitment	No	The recruitment channel is generally not relevant to promotion criteria and including it may introduce unnecessary complexity.
no_of_trainings	Number of Trainings Attended	Yes	The number of trainings attended can be indicative of the employee's skills development and readiness for promotion.
age	Age of Employee	Yes	Age can be a factor in promotion decisions, with certain age groups potentially having more experience or being in a better position for advancement.
previous_year_rating	Performance Rating from Previous Year	Yes	Performance ratings are a direct indicator of an employee's performance and are likely to influence promotion decisions.
length_of_service	Duration of Service	Yes	Length of service can impact promotion decisions as employees with longer tenure may have more experience and loyalty.

awards_ won?	Awards Won	Yes	Winning awards can indicate exceptional performance and can positively influence promotion decisions.
avg_ training_ score	Average Training Score	Yes	Training scores reflect the employee's learning and capability, which can be important for promotion eligibility.
is_promote d	Promotion Status	Yes	This is the target variable for the prediction model and is essential for training and evaluating the model.