

## Project Initialization and Planning Phase

Date	9 July 2024
Team ID	SWTID1720174957
Project Title	Human resource management employee promotion prediction
Maximum Marks	3 Marks

### Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	Develop a model to predict employee promotions using historical data for enhanced HR decision-making.
Scope	Collect, preprocess data, engineer features, train models, deploy for real-time predictions with ethical considerations.
Problem Statement	
Description	Utilize historical data to forecast employee promotions for enhanced organizational decision support.
Impact	Improve fairness and efficiency in promotion decisions, leading to a motivated and stable workforce.
Proposed Solution	
Approach	Employ machine learning algorithms on historical data to predict employee promotion likelihood accurately.
Key Features	Data preprocessing, feature engineering, model selection, validation, deployment integration for real-time promotion predictions

### Resource Requirements

Resource Type	Description	Specification/Allocation
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<b>Hardware</b>		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
<b>Software</b>		
Frameworks	Python frameworks	e.g., Flask, Seaborn, Keras
Libraries	Additional libraries	e.g., scikit-learn, pandas, numpy
Development Environment	IDE, version control	e.g., Jupyter Notebook, Git
<b>Data</b>		
Data	Source, size, format	e.g., Kaggle dataset, 10,000 images