

Project Initialization and Planning Phase

Date	8 July 2024
Team ID	xxxxxx
Project Title	Human Resource Management Predicting Employee Promotions Using Machine Learning
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	The primary objective of the project is to develop and implement a machine learning model that accurately predicts employee promotions, ensuring a fair, objective, and efficient promotion process within the organization.
Scope	The project will use employee demographics, job information, performance metrics, training records, and historical promotion data to develop and implement a machine learning model for predicting promotions, ensuring integration with HR systems, model evaluation, ethical considerations, and excluding external factors and temporary employees.
Problem Statement	
Description	The problem is that the current employee promotion process is subjective, inconsistent, and time-consuming, leading to potential biases and inefficiencies that hinder fair and effective talent management.
Impact	Solving this problem will create a fair, efficient, and data-driven promotion process, enhancing employee morale, retention, and overall organizational performance.
Proposed Solution	

Approach	The methodology involves collecting and preprocessing data, selecting and training machine learning models, tuning hyperparameters, integrating the model into HR systems, and continuously evaluating its performance while ensuring fairness and privacy.
Key Features	The proposed solution uniquely combines machine learning with HR practices to provide a data-driven, objective, and scalable approach to predicting employee promotions, enhancing fairness, and reducing biases in decision-making.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	NVIDIA RTX 3060 GPU
Memory	RAM specifications	16 GB
Storage	Disk space for data, models, and logs	512 SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Scikit-learn, Pandas, Numpy, Seaborn
Development Environment	IDE, version control	VsCode, Git
Data		
Data	Source, size, format	Kaggle dataset, 54000, csv