

# Project Initialization and Planning Phase

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| Date | 15 March 2024 |
| Team ID | 740071 |
| Project Title | Work Force retention system |
| Maximum Marks | 3 Marks |

# Project Proposal (Proposed Solution) report

Employee turnover is a significant challenge for our organization, resulting in increased recruitment and training costs, disruption of operations, and loss of institutional knowledge. To address these issues more effectively, we propose the development and implementation of a Machine Learning (ML)-based Workforce Retention System. This system will leverage data-driven insights to predict employee turnover, identify the root causes, and recommend targeted retention strategies.

## Project Overview



The objective of the Workforce Retention System is to significantly reduce employee turnover by leveraging machine learning to predict at-risk employees and identify key factors contributing to their potential departure. By understanding these **Objective** factors, the system aims to develop targeted retention strategies

that enhance employee engagement and satisfaction

# Scope

The scope of the Workforce Retention System encompasses the

entire organization, targeting all departments and job roles with

an initial focus on high-turnover areas.

## Problem Statement

Addressing the organizations high rate of employee turnover, **Description** particularly among its skilled and experienced workforce.

Implementing a Workforce Retention System, especially one augmented by machine learning, can have profound and far-

**Impact** reaching impacts on an organization reduced Employee

Turnover, Cost Savings

, Improved Employee Morale and

Engagement

## Proposed Solution

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| **Approach** | To address the existing problems with workforce retention systems, a comprehensive and strategic approach is necessary. Our proposed solution encompasses a system with several key components. |
| **Key Features** | Turnover Prediction, Factor Analysis, Dashboard and Reporting Alerts and Notifications, Monitoring,Personalized Action Plans. |

## Resource Requirements

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| **Resource Type** | **Description** | **Specification/Allocation** |
| **Hardware** |  |  |
| Computing Resources | CPU/GPU specifications, number of cores | T4 GPU |
| Memory | RAM specifications | 8 GB |
| Storage | Disk space for data, models, and logs | 1 TB SSD |
| **Software** |  |  |
| Frameworks | Python frameworks | Flask |
| Libraries | Additional libraries | scikit-learn, pandas, numpy, matplotlib, seaborn |
| Development Environment | IDE | Jupyter Notebook, Google  Colab, Visual studio code |
| **Data** |  |  |
| Data | Source, size, format | Kaggle dataset, 614, csv  UCI dataset, 690, csv |