Hope Artificial Intelligence

Scenario Based Learning

A company works with number of employees, all the works are dependents on the employees. Even if one of the employees resign the job immediately then assigned work will be not finished at the time, so delivery of the project to the clients will be delayed. Company planned to make solution for this, they want to know which employee may resign next. If they know previously, they can arrange alternative to avoid such problem. As an AI Engineer you must give Solution to this.

A) How will you achieve this in AI?

Requirement:

To predict in a particular day - which Employee is likely to resign, with the help of past data of each employee's productivity

Input for this problem statement :

Data of Employees for the past 3 months to know the productivity of each employee like Working hours, Sign in Time and Sign Out Time, Daily work completion status in %,Participation Attendance in Team Meetings

Output:

Calculate Productivity. Employee is (1) Likely to resign or (2) No Signs of Resignation

B) Find out the 3 -Stage of Problem Identification

Stage1:

We need to analyze an employee's productivity based on past dates. Input will be "Any Day" in Future to predict output exactly 3 months before that day. So we need to use "Time Series Data".

We will also be using Number input like leaves, Years of Experience. So we need to choose "Machine Learning" Domain

Stage2: Requirement is clear. Input and Output is defined. So this needs "Supervised Learning"

Stage3: Either output will be Likely to Resign or Will not resign, So this comes under "Classification"

C) Name the project

Employee Attrition Analysis & Control using AI.

D) Create the dummy Dataset.

For Time Series Domain:

Employee Name	Dates	SignIn Time	SignOut Time	Working Hours /Day	Daily Task% Completion	**Output(Productivity)**
Priya	1-12-2024	11:00	17:00	6	50%	High/Normal/Low
Priya	2-12-2024	10:30	17:00	6.5	50%	High/Normal/Low
Priya	3-12-2024	11:00	16:00	5	40%	High/Normal/Low

For Machine Learning:

Employee Name	Age	Total Years of Experience	Total Years of Experience in Organization	Leaves taken in Past 3 months	Average Working hours/Day	Number of Job Hops before Joining this Company	**Productivity**	Output
Priya	30	7	2.5	6	5.5	1	High/Normal/ Low	Likely To Resign