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?

To predict which employee might resign, we'd use **Predictive Modeling** with a **Supervised Machine Learning** approach. This includes data collections from HR records, Performance scores, Satisfaction survey results, Attendance, Promotions, etc. We can also use **NLP** for sentiment analysis and **Time Series analysis** for resignation season trends.

B) Find out the 3 -Stage of Problem Identification

Stage 1: Domain selection – **Machine Learning**

Stage 2: Learning selection – **Supervised Learning**

Stage 3: Department selection – **Classification**

C) Name the project

Project EarlyExit: AI-Driven Employee Resignation Predictor

D) Create the dummy Dataset.

Employee ID	Age	Tenure Years	Job Role	Performance Score	Satisfaction Score	Years after Promotion	Resigned
10001	25	3	Developer	4	3.5	2	Yes
10002	39	10	BA	3	4	1	No
10003	52	7	Team Lead	3	2.5	4	Yes
10004	28	5	QA Tester	4	4	1	No