Employee Resignation Prediction Model

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?

B) Find out the 3 -Stage of Problem Identification

C) Name the project

D) Create the dummy Dataset.

A) How will you achieve this in AI?

The above mentioned scenario can be achieved based on calculation of employee's salary and employee's working experience

Model 1: Calculate average life span (**number of years worked**) of all the employees in the company

- For example, if average working years span of an employee is **3 years** in the company, an employee who has completed 3 years in the company may resign soon as it is the average working years span, the resignation possibility prediction is "Yes"

Model 2: Calculate **average salary** of employees **based on experience**

- For example, **average salary package** is **10Lakh per year** for employee with **5 years of experience** and average salary is 6Lakh per year for employee with 3 years of experience
- So, if salary is lesser than average salary, that employee may resign and look for other job opportunities, the resignation possibility prediction is "Yes"

Overview:

So we are taking **salary** and **years of experience** of employee as inputs and predicting the resignation possibility (Yes or No)

B) Find out the 3 -Stage of Problem Identification:

Inputs:

1. Current Salary
2. Number of years worked in current company

3. Overall Work Experience (in years)

Output:

Job Resignation Possibility (Yes or No)

Stage 1 - Domain Selection [Machine Learning]:

- Since the **inputs are numbers** [salary, work experience], **Machine Learning** domain can be selected

Stage 2 - Learning Selection [Supervised Learning]:

- Prediction criteria is clear
- All the required inputs are available in dataset, so "**Supervised Learning**" can be applied

Stage 3 - Output Model Selection [Classification]:

- Since the output value can be classified as Yes or No , **Classification** can be applied

Overall, Machine Learning - Supervised - Classification

C) Name the project:

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D) Create the dummy Dataset.

Gender	Age	Marital Status	Location	Role	CurrentExp	OverAllExp	Salary	ResignationPossibility
Male	30	Married	Chennai	TeamLead	3	6	8Lakh	Yes
Male	23	Single	Madurai	Associate	1	2	4 Lakh	No
Female	29	Single	Chennai	ProjecLead	2	7	12 Lakh	Yes
Female	28	Married	Chennai	TeamLead	4	6	15Lakh	No
Male	24	Single	Coimbatore	Associate	2	3	5Lakh	No