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?

B) Find out the 3 -Stage of Problem Identification

C) Name the project

D) Create the dummy Dataset

1. How will you achieve this in AI?

We can achieve this in AI using the by identifying the prediction and call to action.

In the above problem statement, the **prediction** is to categorize if the employee will resign.

**Call to action** if employee is resigning then the alternative to be arranged. Since the problem statement has Prediction and call to action then the solution can be achieved through AI.

1. Find out the 3 -Stage of Problem Identification:

**Stage1: Domain Selection:**

A company can analyse the past resignation data to identify patterns. To do the data analysis company should consider the factors like tenure, Performance review, etc.

This data is stored in a database the tenure is numeric and performance review is a numeric data. Hence **Stage 1** the input data is numeric and **machine learning** is used.

**Stage2: Learning Selection:**

Since the requirement is clear and the data set is having the clear input and output **supervised learning** method is applied.

**Stage3: Classification or Regression:**

To make call to action the final output should be classifying employees as **anticipating resignation** and **not-anticipating resignation**. Hence the learning model used is **Machine Learning – Supervised Learning – Classification**.

1. Name the project:
   1. **Predicting Employee Retention with AI**
2. Dummy Data Set

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No** | **Employee ID** | **Employee Name** | **Years of Experience** | **Tenure (Years)** | **Anticipating Resignation?** |
| 1 | 1001 | Rahul Sharma | 5 | 3 | No |
| 2 | 1002 | Priya Singh | 8 | 5 | Maybe |
| 3 | 1003 | Akash Kapoor | 2 | 1 | Yes |
| 4 | 1004 | Priyanka Patel | 7 | 4 | No |
| 5 | 1005 | Aditya Gupta | 10 | 8 | Maybe |
| 6 | 1006 | Kiran Desai | 3 | 2 | No |
| 7 | 1007 | Neha Mehta | 1 | 0.5 | Yes |
| 8 | 1008 | Sahil Joshi | 4 | 3 | Maybe |
| 9 | 1009 | Anjali Rao | 6 | 4.5 | No |
| 10 | 1010 | Manish Kumar | 9 | 7 | Maybe |
| 11 | 1011 | Ayesha Khan | 2 | 1.5 | No |
| 12 | 1012 | Rohit Yadav | 5 | 3 | No |
| 13 | 1013 | Pooja Verma | 4 | 2 | Maybe |
| 14 | 1014 | Sumit Bajaj | 8 | 6 | No |
| 15 | 1015 | Sonia Malhotra | 1 | 0.25 | Yes |
| 16 | 1016 | Vikram Singh | 7 | 5 | Maybe |
| 17 | 1017 | Isha Sharma | 3 | 2 | No |
| 18 | 1018 | Nikhil Patel | 6 | 4 | Maybe |
| 19 | 1019 | Disha Mehta | 2 | 1 | No |
| 20 | 1020 | Arjun Kapoor | 9 | 7.5 | Maybe |