**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.

**Solution**

1. **How will you achieve this in AI?**

* From the problem statement given above, we can clearly understand that the company wants to find out which employee resign next or in the future, specifically we can take the employee from which department, will resign next.
* We may have the past employee resignation history, **Month wise / Year Wise** based on that, we can predict the employee from which department will be resigning next or in the future.
* From this, we can conclude that we will have **time series data as the input**, so we can select time series analysis as our domain, then we have clear requirement we need to find the employee who is going to resign and our **ouput will be countinous value** (i.e) no. Of employees resigned during the particular period.
* From this observation, we can solve this problem using the **time series analysis -> Supervised Learning -> Regression**.

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

1. Time - Series Analaysis
2. Supervised Learning
3. Regression
4. **Name the project**

Attrition Rate Predictor

1. **Create the dummy Dataset.**

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| Month | Department | Resignation Count |
| Jul - 2024 | IT | 3 |
| Aug - 2024 | HR | 5 |
| Sept - 2024 | Finance | 2 |