**Problem Identification Assignment 1**

**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:**

A) How will you achieve this in AI?

* Need to analyze requirement and get dataset from the client.
* Employees attaining a solid number of experiences like 2 years, 1 year 6 months may think to upgrade their career and searching for better opportunity. By analyzing the number of years of experience, we may predict who may resign next.

B) Find out the 3 -Stage of Problem Identification

* Stage 1 - Inputs may be number of employees, total years experience, etc. we get ‘total years experience’ as number input from the dataset. Therefore, it comes under **Machine** **Learning**.
* Stage 2 – Requirement is clear. We need to predict which employee may resign next. But, we have to find the output employee may resign or not from the input - total years experience. Therefore, it comes under **Semi Supervised Learning.**
* Stage 3 **-** Output may be a categorical data - Yes or No. Therefore, it is **Classification**.

**Machine** **Learning Semi Supervised Learning Classification**

C) Name the project: **Employee Resignation Prediction**

D) Create the dummy Dataset

**Dummy Dataset:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No** | **Name** | **Age** | **Gender** | **Years of Experience** | **Label** |
| 1 | Kaviya | 34 | Female | 5 | Yes |
| 2 | Sindhu | 26 | Female | 0.8 | No |
| 3 | Muthu | 30 | Male | 3.3 | No |
| 4 | Ram | 28 | Male | 4.6 | Yes |
| 5 | Preetha | 23 | Female | 0.2 | No |