**PROBLEM IDENTIFICATION ASSIGNMENT**

AI TECHNOLOGY TO FORECAST EMPLOYEE RESIGNATION

**Introduction**

AI is the evolving technology which has many applications in various fields. In HR field it helps in predicting various factors like employee turnover, automating performance analysis of the employees, workforce management etc. This topic of assignment deals with predicting the employee’s resignation by analyzing various factors of the employees like their involvement in the work, their productivity, taking new assignments, promotions, co-ordination with the team.

**The machine learning algorithm** is used to predict the employee resignation which helps the company to complete the projects on-time by assigning the task to other employees in the team.

**3-Stage of problem Identification**

**Stage-1**

Machine learning algorithm is used as the data set is not image or raw text.

**Stage -2**

Supervised learning is applicable as we have the input data and the requirement or class labels or output variable is predicting whether the employee will continue in the job or leaves the company.

**Stage-3**

The prediction is the employee will continue in the job or leaves the Job. So, it is a categorical data and it comes under classification.

The three stages are:

**Machine Leaning Domain-Supervised Learning-Classification**

**Dummy Dataset**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Employee ID** | **Employee Name** | **Designation** | **Education** | **Experience** | **Year of Joining** | **Salary Per Annum** | **Projects completed within given time or not** | **Willingness**  **to handle new long-term Assignments** | **Taking leave often** | **Status** |
| **1111** | **xxxx** | **Software Architect** | **xxxx** | **5** |  | **12 lakhs** | **1** | **Not willing** | **Yes** | **Will resign** |
| **1112** | **yyyy** | **Team Lead** | **yyyy** | **8** |  | **18 lakhs** | **2** | **Willing** | **No** | **Will not Resign** |
| **1113** | **aaaa** | **Chief Architect** | **aaaa** | **12** |  | **25 Lakhs** | **4** | **Not Willing** | **Yes** | **Will resign** |
| **1114** | **bbbb** | **Engineering Manager** | **bbbb** | **15** |  | **30 lakhs** | **5** | **Willing** | **No** | **Will not Resign** |

**Note:** If the results are not satisfied with Machine Learning Algorithms, we could achieve the desired results Deep Learning.