Problem Statement:

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.

Project Name: Employee Resignation Prediction

How to Achieve:

The approach is to train the AI with the input and output data that the company has provided us. With the past data given by the company, use AI to predict employee satisfaction score and from that predict the risk of employee resignation. Based on the prediction, company should implement call to action such as providing employee with perks and flexibility to increase his satisfaction and as well as cross train another resource in the case he leaves the organization.

3-Stages of identification:

Stage 1: Machine Learning as the data is in an excel with numerical values as majority

Stage 2: As the input and output labels are clearly defined (as shown in table below), it should fall under Supervised Learning

Stage 3: As we are categorizing the risk of the employee resigning, it should be Classification

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Input Variables | | | | | | | Output Labels | |
| Employee Name | Year of Joining | Age | Level | Q4 % performance | Q3 % performance | Q2 % performance | Employee Satisfaction Score | **Risk of resignation** |
| Alpha | 2012 | 45 | Manager | 87 | 84 | 89 | 85 | Low |
| Beta | 2016 | 32 | Team Lead | 68 | 71 | 86 | 75 | Medium |
| Gamma | 2025 | 22 | Tester | 78 | 76 | 77 | 77 | Medium |
| Lambda | 2021 | 27 | Developer | 55 | 62 | 78 | 63 | High |

Dummy Dataset