**Problem Identification Assignments**

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.

1. A) How will you achieve this in AI?
   1. - *Based on the given employee dataset – (Demography, Salary, Performance, Attendance, Currently Working / Resigned) , We should train AI with given dataset and AI will predict whether employee will resign or not. Call of action is to recruit a replacement.*
2. B) Find out the 3 -Stage of Problem Identification

* *Stage – 1: Machine Learning / Deep Learning*
* *Stage – 2: Supervised Learning*
* *Stage – 3: Classification*

1. C) Name the project
2. - ***Employee Resignation Indicator***
3. D) Create the dummy Dataset.
4. - Dataset ( Monthly Record)

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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **EMP ID** | **EMP Name** | **Gender** | **No. of Yrs** | **Salary / Yr** | **Perf. Rating** | **Promotion** | **Overtime** | **Tardy %** | **Resigned** | | 1 | John | M | 5 | 120,000 | 5 | 2023 | Yes | 5% | No | | 2 | Olivia | F | 8 | 90,000 | 5 | 2021 | No | 15% | Yes | | 3 | Bob | M | 1 | 120,000 | 5 | 2023 | Yes | 1% | No | | 4 | Emily | F | 10 | 120,000 | 5 | 2024 | Yes | 5% | Yes | | 5 | John | F | 9 | 60,000 | 3 | 2023 | Yes | 15% | Yes | | 6 | John | F | 3 | 75,000 | 4 | 2021 | No | 15% | Yes | | 7 | John | M | 2 | 75,000 | 5 | 2023 | No | 20% | No | | 8 | Sophia | F | 1 | 60,000 | 3 | 2020 | Yes | 20% | Yes | | 9 | John | M | 4 | 90,000 | 5 | 2024 | Yes | 25% | No | | 10 | James | F | 1 | 50,000 | 4 | 2024 | Yes | 25% | No | |