

## Will an employee leave the organization?

Employee resignation is a major problem for many organizations. According to the General Authority for Statistics, in the second quarter of 2021 labor market, the total number of resigned employees reached 222,801.<sup>[1]</sup> This could result in a loss of money, time, and effort for an organization, especially when they are valuable and talented employees.

The purpose of this project is to build a Classification model that helps the organization to understand the factors that led their best and most experienced employees to leave. And it will allow them to predict whether the employee will leave the organization or continue to work for it, to provide the necessary support to retain the employees and minimize the negative impact on the organization.

I intend to use a human resources dataset from Kaggle website. The dataset contains 14,999 data points and 10 features.<sup>[2]</sup> Below are the features and the definitions of each one:

#	Feature name	Description	Data type
1	satisfaction_level	Level of employee satisfaction (0-1)	Float
2	last_evaluation	Time since last performance evaluation (in years)	Float
3	number_project	Number of projects completed while at work	Integer
4	average_monthly_hours	Monthly average hours worked	Integer
5	time_spend_company	Number of years the employee has worked in the organization	Integer
6	Work_accident	Whether they have had a workplace accident (0 - Did not have an accident at work and 1 - Had an accident at work)	Integer
7	promotion_last_5years	Whether they have had a promotion in the last 5 years (Promotion indicative, 0 - No and 1 – Yes)	Integer
8	department	Department the employee works for	Object
9	salary	Relative level of salary (Low, Medium and High)	Object
10	left	Whether the employee left the workplace or not (Dismissal indicator, 0 - Contracted and 1 – Off)	Integer

### Tools:

- Data processing: Numpy and Pandas
- Visualization: Matplotlib and Seaborn
- Modelling: Scikit-learn

### References:

[1] ٢٠٢١. الهيئة العامة للإحصاء. سوق العمل. [online] Available at: <<https://www.stats.gov.sa/ar/814>> [Accessed 30 October 2021].

[2] Kaggle.com. 2021. *HR Analytics*. [online] Available at: <<https://www.kaggle.com/giripujar/hr-analytics>> [Accessed 30 October 2021].