# Employee Termination Prediction

## Abstract

The most critical component of accomplishment in the system is an effective employee who has numerous characteristics. These characteristics are his ability to validate himself through good points of sale, commitment, and adherence to the official's satisfaction. Moreover, this will assist the organization's functioning process and delivery mechanism that will reflect the product's quality. The improvement of a company image, which is an essential element, is demonstrated by the satisfaction of personnel's service. Furthermore, staff turnover will reduce the functionality of an organization if there is a lack of employees. This study aims to predict if the employee will resign or not.

## Design

This project is one of the T5 Data Science Bootcamp requirements. Machine learning models helped us to predict the termination.

## Dataset

This dataset used in this research is publicly available. The dataset consists of employee's information like (employee id - employee record date (year of data) - birth date hire - age - length of service - city - department ). The data contains 49653 instances with 18 variables. The dataset can be found at Kaggle here

## Algorithm

1- Drop unnecessary columns
2- Drop all columns not available before termination
3- Train-test split

### Models

Logistic Regression was used to predict the termination, with Accuracy 100%. The model was trained on a 70/30 train vs. test. So, the result is:  Accuracy: 100%

## Tools

1- Pandas for data manipulation
2- Scikit-learn for modeling