Project Name: Attrition Prediction on AR Night Shift Employees

**Project Goals**

Determine active employees that are high risk of attrition

**Description**

Build a statistical model which gives us the risk score (probability of employee leaving) for employees by capturing important factors attributing to attrition using Human Resource data for current and past employee.

**Input**

* Active and Inactive Employee (Total (2617) Current (1211) and Past (1406) Employees) from 2015 and 2016 years
* Vertical - 'Accounts Receivable’
* Job Role - Team Member
* Shifts - 04:00 PM-01:00 AM, 05:30 PM-02:30 AM, 06:00 PM-03:00 AM, 06:30 PM-03:30 AM, 08:00 PM-05:00 AM
* Attributes
* Experience in AGS
* Employee Age
* Gender
* Marital Status
* Work Location
* Experience Type
* Production Average Last3 Months
* Course Level
* Total Extra Hours Worked
* Function
* Transport Mode
* Engagement Index
* Quality Average Last3 Months
* Last 30 Days Leave Count
* Client
* Joining Month
* Shift
* Job Role

Assumptions

* Considered current work related attributes only
* Considered attributes (where missing data was less than 20%) with imputation
* Previous location attributes will not be useful to tell about attrition as dynamics of business is changed significantly within last 2 years (Chennai to Hyderabad)

Findings

* Managers are well aware about probable attrition of employee. (Engagement Index (Red) has very high positive effect similarly high negative effect of Engagement Index (green))
* People are leaving in early in their career (Newly joined are leaving more compared to AGS veterans)
* Last 30 days leave count is the among the highest contributing variable to the analysis
* When other attributes are same employees who joined in, December, October, November, September, July, August, June have less odds of leaving compared to who joined in January
* When other attributes are same compared to Chennai, Hyderabad employees have less odds of leaving
* When other attributes are same compared to Fresher, Lateral and Industry Fresher employees have higher odds of leaving
* Higher productive employee and employee giving highest quality has less odds of leaving

 Important Factors

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute** | **Level** | **Effect on Attrition** | **Importance** |
| Engagement Index | Red | More likely | Very High |
| Joining Month | December | Less likely | Very High |
| Last 30 Days Leave Count |  | More likely | Very High |
| AGS Experience in Months |  | Less likely | Very High |
| Work Location | Hyderabad | Less likely | Very High |
| Joining Month | October | Less likely | Very High |
| Joining Month | November | Less likely | Very High |
| Joining Month | September | Less likely | Very High |
| Experience Type | Lateral | More likely | Very High |
| Joining Month | July | Less likely | Very High |
| Joining Month | August | Less likely | Very High |
| Joining Month | June | Less likely | Very High |
| Experience Type | Industry Fresher | More likely | High |
| Production Average Last3 Months |  | Less likely | Medium |
| Joining Month | April | Less likely | Medium |
| Quality Average Last3 Months |  | Less likely | Medium |
| Function Name | Voice | More likely | Medium |

 Model Results

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Count** | **Current Employee probabilities** | **Employee Leaving probabilities** | **Accuracy**  **%** |
| All Data | 2617 | 0.1884 | 0.8376 | 89.45 |