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| Human Resource Analytics  Mind&Sound Inc. |
| Case Study |
|  |
| 2019 |

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1. Case Study - Team 2

## Business Scenario

Mind&Sound Inc. is a successful event production company organizing large concerts as well as corporate parties and high end training events. Clients have typically been very pleased with the quality of work. The company is known for its creativity, on-time delivery and adherence to budget.

However in recent times the CEO Mr.Volume noticed that employee turnover is increasing with a significant number of experienced personnel resigning. While being top notch in terms of client projects Mind&Sound Inc.has been running a fairly low tech internal HR system. Records have been maintained manually across various computers without a centralized system.

Mr. Volume has hired you as an analytics expert to help him understand what is happening.

## Data Description

An intern working with you as the consultant firm spent a lot of time in finding all the HR data and provided you with a master file.

The file Team 2 - HR Analytics - Dataset.csv contains the following data fields.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable name** | **Type** | **Variable Length** | **Label** | **Format** | **Informat** | **Description** |
| Work\_accident | Num | 8 |  | BEST12. | BEST32. |  |
| average\_montly\_hours | Num | 8 |  | BEST12. | BEST32. |  |
| last\_evaluation | Num | 8 |  | BEST12. | BEST32. |  |
| left | Num | 8 |  | BEST12. | BEST32. |  |
| number\_project | Num | 8 |  | BEST12. | BEST32. |  |
| promotion\_last\_5years | Num | 8 |  | BEST12. | BEST32. |  |
| salary | Char | 6 |  | 6 | 6 |  |
| area | Char | 5 |  | 5 | 5 |  |
| satisfaction\_level | Num | 8 |  | BEST12. | BEST32. |  |
| time\_spend\_company | Num | 8 |  | BEST12. | BEST32. |  |

## Business Questions

The CEO Mr. Volume needs to stop the high turnover. Clients have been complaining about the fluctuations and changing points of contact. For the first time in a decade revenue growth might be negative. Mr. Volume is hopeful that you will be able to profile the candidates likely to resign.

* Create a profile/profiles of the so far departed employees.
* Identify the most likely candidates to resign next.
* Is Mr. Volume’s gut feeling that the best most experienced employees are leaving prematurely true?
* What does the company need to change to retain employees? Develop a low, mid and high cost solution focusing different factors that cause turnover.
* Assuming that two low performers do as much work as one high performer. Is there merit to the idea of letting a low performer go and use the freed up budget to keep the high performer engaged?

## Analytical Ideas

* Generate descriptive statistics and explore data with graphs
* Perform analysis of variance and apply multiple comparison techniques
* Detect associations among variables
* Handle missing data values
* Tackle multicollinearity in your predictors
* Use diagnostic statistics to assess statistical assumptions and perform a regression model
* Use regression model selection techniques to aid in the choice of predictor variables in multiple regression
* Identify potential outliers in multiple regression
* Assess model performance and compare models.
* Score new data using developed models.