

## CASE STUDY - HR ANALYTICS

### Exploratory & Predictive Analytics



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**BUSINESS CONTEXT:**

Human Resources are critical resources of any organization. Organizations spend huge amount of time and money to hire and nurture their employees. It is a huge loss for companies if employees leave, especially the key resources. So if HR can predict whether employees are at risk for leaving the company, it will allow them to identify the attrition risks and help understand and provide necessary support to retain those employees or do preventive hiring to minimize the impact to the organization.

Predictive retention modeling allows organizations to identify high-risk employees, build profiles of those most likely to leave or stay, and understand how risk is distributed throughout the organization. Several innovative large organizations have started building these kind of HR analytics with great success in the past years (e.g. Google, HP,...). Next to the traditional HRIS dashboard with descriptive turnover information, we see more and more companies adding these predictive turnover information to their standard reporting. An overview of the 7 benefits, thanks to SAS for this information:

**Benefits from Predictive Modeling in HR:**

1. Recognize the strengths and vulnerabilities of the workforce and predict vacancies and leadership needs.
2. Track and analyze critical skills, and predict which skills will be lost and when by predicting turnover.
3. Measure turnover, understand its causes and design programs to control it to reduce vacancy costs – both financial and productivity – to avoid their devastating effects on business performance.
4. Assess risk on an organization-wide level by integrating workforce and relevant business and third-party data for comprehensive risk analysis.
5. Build weighted risk factors into strategic human capital management plans and reduce risk by understanding workforce supply-and-demand patterns.
6. Understand and mitigate risk linked to seasonal absences, resignation trends or length of employment to prevent being blindsided by loss of critical workers, skills or leadership.
7. Measure, monitor and predict the effect of risk factors over time and prevent organizational risk by devising contingency plans based on insight and foresight.

**DATA AVAILABLE:**

➤ **HR\_comma\_sep.csv**

**Data Description:**

satisfaction\_level: Employee satisfaction level

last\_evaluation: Last evaluation

number\_project: Number of projects

average\_monthly\_hours: Average monthly hours

time\_spend\_company: Time spent at the company

Work\_accident: Whether they have had a work accident

promotion\_last\_5years: Whether they have had a promotion in the last 5 years

department: Department

salary: Salary

left: Whether the employee has left